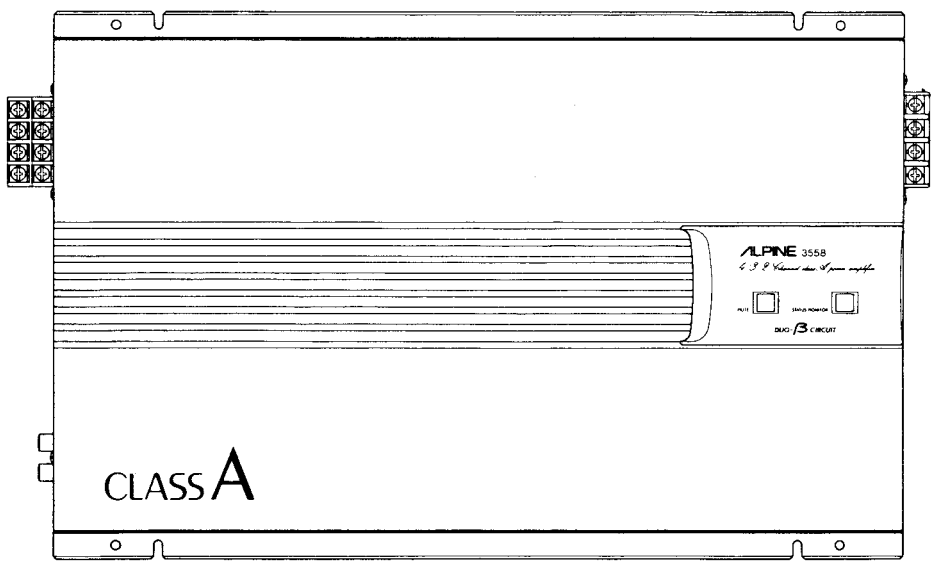
ALPINE SERVICE MANUAL

4/3/2 Channel Class A Power Amplifier



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Additional Schematic Diagram Inserted.

Specifications

<4ohm - 4channel stereo mode>

Power Output (20Hz - 20kHz, 0.08% T.H.D.)	40W / ch
Frequency Response (- 1dB, at 1W / ch output)	20Hz - 70kHz
Channel Separation (1kHz, at 40W / ch output)	50dB
Current Drain (No signal input)	7A
Current Drain (at 40W / ch output)	40A
Input Sensitivity (at 40W / ch output)	Fixation : 500mV ± 20%
	Variable : 100mV - 2V ± 30%
Input Impedance	Fixation : 47kohm ± 20%
	Variable : 47kohm ± 20%
S / N Ratio (IHF - A, at 40W / ch output)	100dB
Residual Noise	Fixation : 3mV

<2ohm - 4channel stereo mode>

Power Output (20Hz - 20kHz, 0.15% T.H.D.)	60W / ch
Current Drain (at 80W / ch output)	75A

<4ohm BTL monoral mode>

Power Output (20Hz - 20kHz, 0.15%T.H.D.)	DC14.4V : 140W
	DC12.5V : 120W
Current Drain (at 160W output)	74A

<General>

Fuse Requirement	20A × 2 (Battery)
Power Sourse	DC14.4V
Semiconductors	8 IC's, 96 Transistors, 16 FET's, 59 Diodes, 30 Zener Diodes
Dimension (W × H × D)	400 × 73 × 232mm
Weight	6kg

Note : Due to continuing product improvement, specifications and designs are subject to change without notice.

FEATURES

- **CLASS A**
  Small Signal Class-A operation offers the optimum in sonic transparency by totally eliminating crossover (notch) distortion.

- **4/3/2-CHANNEL OPERATION**
  The 3558 can be used as:

  a: 4-Channel amplifier, producing 40W per channel into 4 ohms or 70W per channel into 2 ohms.

  b: 3-Channel amplifier, producing 40W (4 ohms) or 70W (2 ohms) into channels 1 & 2, and 140W (4 ohms) into the third channel.

  c: 2-Channel amplifier, producing 140W per channel into 4 ohms.

- **DUAL INDEPENDENT, OPTICALLY ISOLATED, PWM DC-TO-DC SWITCHING MODE POWER SUPPLIES**
  Two independent power supplies prevent any possible intermodulation and crosstalk between the two amplification sections. Each power supply is optically isolated from its audio section, completely eliminating susceptibility to installation-related noises and ground loops. These accurately regulated and high power DC-to-DC converters provide excellent power output throughout the audio band width (20 Hz to 20 kHz). They also possess soft clipping characteristics for superb transient response and musicality.

- **STATUS MONITOR**
  This indicator illuminates in green when the amplifier is on and operational. This light will turn orange if any internal protection circuitry is activated.

- **MUTING INDICATOR**
  This indicator signals the activation of the speaker output relays. The relays are open when the amplifier is turned on and therefore the indicator will be orange. As soon as the muting function is accomplished and all circuitry is stabilized, the relays are closed and the indicator turns to green.

- **DUO-β FEEDBACK CIRCUITRY**
  Alpine's proprietary dual feedback circuitry stabilizes the amplifier, removes DC offset, and offers excellent total harmonic distortion (T.H.D.) characteristics. It also provides very low T.I.M., excellent transient response, stability, and musicality quality.

FEATURES

- **NO CURRENT LIMITING**
  Absence of current limiters in the audio section ensures low T.I.M., excellent transient response, and superb sonic quality.

- **S.T.A.R. CIRCUITRY**
  The Alpine-developed Signal Transit for Accurate Response circuit topology improves sonic properties by reducing interaction between different sections of the circuitry.

- **MODE SELECTOR SWITCH**
  Two independent switches, one for channel 1 and 2, the other for channels 3 and 4, configure the amplifier for stereo or bridged mono operation. When in bridged mode, the switch also selects either the right or the left channel input connector.

- **DIRECT INPUT SWITCH**
  When in DIRECT mode, this switch bypasses the input section circuitry such as the variable gain control. This allows an even cleaner, sonically pure direct connection, for the purist audiophile. In VARIABLE mode, the variable gain adjustment system not also allows independent level setting for each pair of channels, but also offers excellent compatibility with a variety of signal sources.

- **FULLY DISCRETE, COMPLEMENTARY OUTPUT CIRCUITRY**

- **DUAL MODE, FORCED AIR TUNNEL COOLING FAN SYSTEM**

- **INDEPENDENT, CONTINUOUSLY ADJUSTABLE GAIN CONTROLS FOR CH1/2, CH3/4**

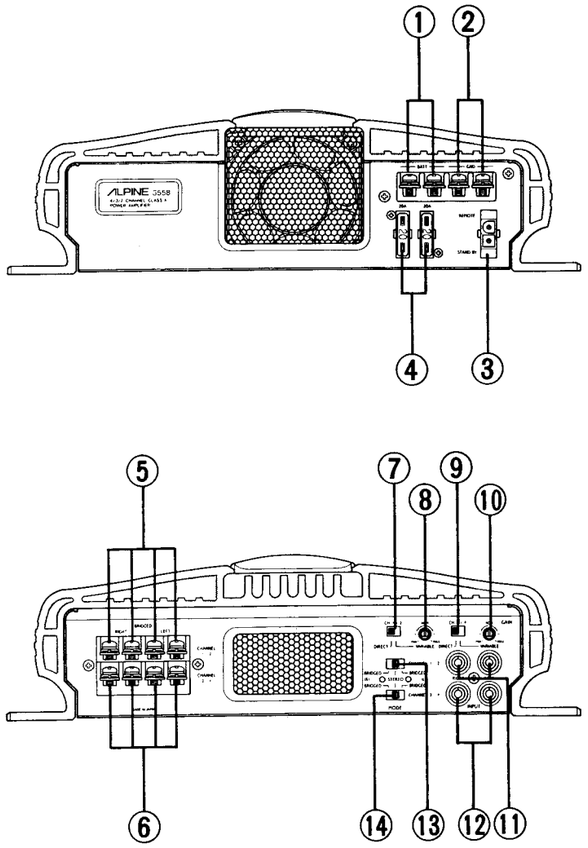
- **GOLD-PLATED RCA INPUT CONNECTORS**

- **GOLD-PLATED, SCREW-DOWN POWER AND SPEAKER TERMINALS**

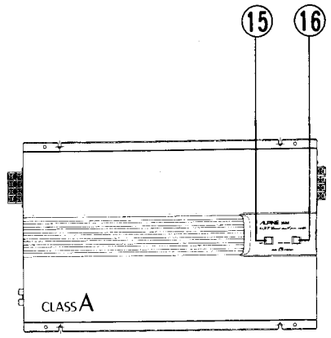
- **HIGH PERFORMANCE, LOW NOISE, AUDIOPHILE QUALITY ACTIVE AND PASSIVE COMPONENTS**

- **EXTRA HEAVY DUTY CONSTRUCTION**

SWITCHES AND TERMINALS



SWITCHES AND TERMINALS



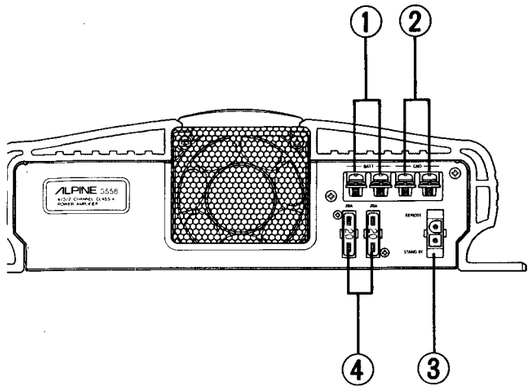
① **Power Terminals**
② **Ground Lead Terminal**
③ **Remote On Connector/STAND BY Connector**
④ **Fuse Blocks**
⑤ **Speaker Output Terminals (Channels 1/2)**

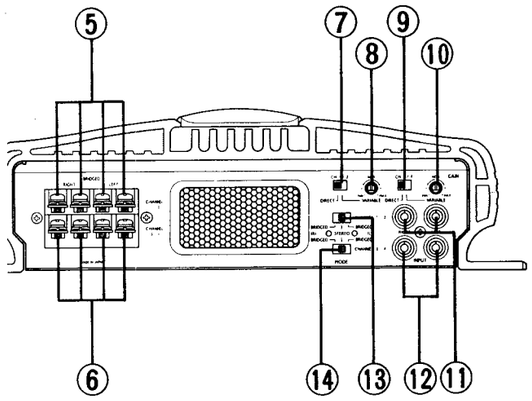
⑥ **Speaker Output Terminals (Channels 3/4)**
⑦ **Input Gain Selector Switch (Channels 1/2)**
⑧ **Input Gain Adjustment Control (Channels 1/2)**
⑨ **Input Gain Selector Switch (Channels 3/4)**
⑩ **Input Gain Adjustment Control (Channels 3/4)**

⑪ **Input RCA Jacks (Channels 1/2)**
⑫ **Input RCA Jacks (Channels 3/4)**
⑬ **Mode Selector Switch (Channels 1/2)**
⑭ **Mode Selector Switch (Channels 3/4)**
⑮ **Mute Indicator**

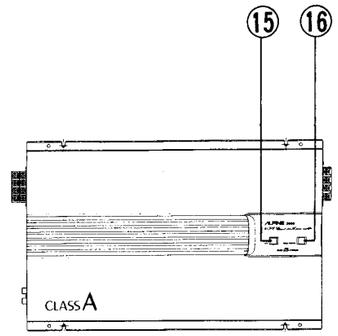
⑯ **Status Monitor**

SWITCHES AND TERMINALS





SWITCHES AND TERMINALS



① **Power Terminals**
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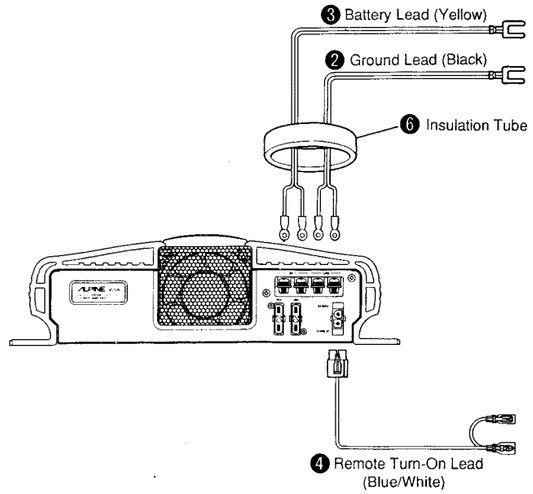
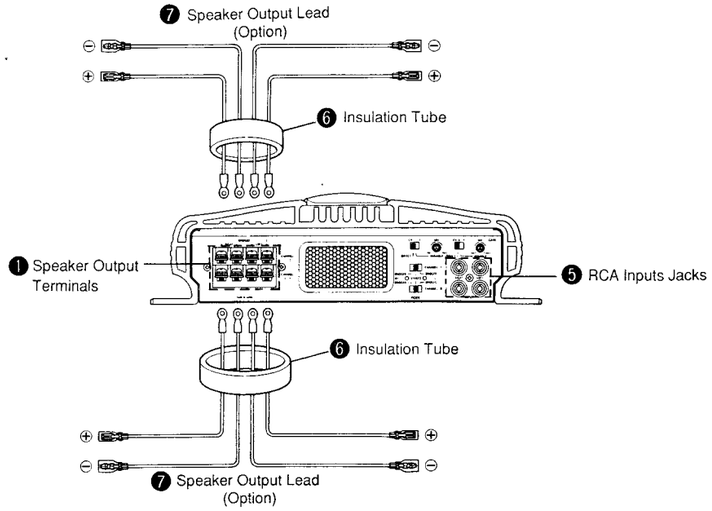
⑧ **Input Gain Adjustment Control (Channels 1/2)**
⑨ **Input Gain Selector Switch (Channels 3/4)**
⑩ **Input Gain Adjustment Control (Channels 3/4)**

⑪ **Input RCA Jacks (Channels 1/2)**
⑫ **Input RCA Jacks (Channels 3/4)**
⑬ **Mode Selector Switch (Channels 1/2)**
⑭ **Mode Selector Switch (Channels 3/4)**
⑮ **Mute Indicator**

⑯ **Status Monitor**

CONNECTIONS





CONNECTIONS

Before making connections, be sure to turn the power off to all audio components. Insulation tubes for the speaker leads and the power supply leads are supplied with the 3558, route the speaker leads and the power supply leads separately through these tubes.

❶ Speaker Output Terminals

The 3558 has two sets of speaker outputs for the Front and Rear speakers. Be sure to observe correct speaker output connections and phasing. In the stereo mode connect the right speaker output to the right speaker and the left to left. Connect the positive output to the positive speaker terminal and the negative to negative. In the bridged mode, connect the left positive to the positive terminal on the speaker and the right positive to the negative terminal of the speaker. Do not use the speaker (-) terminal commonly for the right and left speakers or connect it to the vehicle's chassis ground.

NOTE:

Do not connect speaker leads together or to the chassis ground.

❷ Ground Lead (BLACK)

Connect this lead securely to a clean, bare metal spot on the vehicle's chassis. Verify this point to be a true ground by checking for continuity between that point and the negative (-) terminal of the vehicle's battery.

❸ Battery Lead (YELLOW)

Connect this lead directly to the positive (+) terminal of the vehicle's battery. *Do not connect this lead to the vehicle's electrical system.*

❹ Remote Turn-On Lead (BLUE/WHITE)

Connect this lead to the remote turn-on lead of your head unit.

❺ Input RCA Jacks

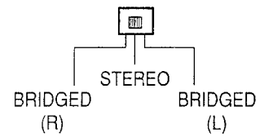
Connect these jacks to the line out leads on your head unit using optional RCA extension patch cords. Be sure to observe correct channel connections; Left to Left, Right to Right, Front to Front, and Rear to Rear.

❻ Insulation Tube
❼ Speaker Output Lead (Option)
❽ Head Unit with Pre-Fader
❾ Extension Cable (Option)
❿ Front Speaker
⓫ Rear Speaker
⓬ Mode Selector Switch
⓭ Subwoofer Speaker
⓮ Head Unit with Pre-Out
⓯ Left Speaker
⓰ Right Speaker
⓱ Active Divide Network
⓲ Input Gain Selector Switch

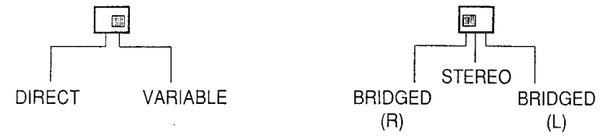
SWITCH SETTINGS

Mode Selector Switches ⓭ and ⓮:

a) Set to the "STEREO" position (center) when the amplifier is used as a 4-Channel stereo system.



b) Set to the "VARIABLE" and "BRIDGED(R)" positions when the amplifier is used for right channel of bridged system.

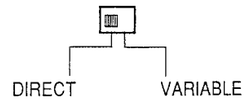


c) Set to the "VARIABLE" and "BRIDGED(L)" positions when the amplifier is used for left channel of bridged system.

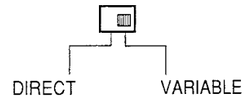
SWITCH SETTINGS

DIRECT/VARIABLE Input Selector Switches ⑦ and ⑨:

a) Set to the "DIRECT" position when connecting the 3558 to other Alpine products. This position sets the input sensitivity to 500 mV which corresponds to the pre-amp output of Alpine products wher amplifier is used as a stereo system.
Set to the " VARIABLE" position if the amplifier is used for bridge system.



b) Set to the "VARIABLE" position when connecting the 3558 to a n Alpine product with an output voltage other than 500 mV. This pc should also be used when adjustment of input sensitivity is requi obtain certain imaging requirements or to compensate for differe speaker efficiencies.



Input Gain Adjustment Controls

After setting your head unit's volume 1/4 of a turn down from the maxir output level, rotate the Input Gain Adjustment Controls ⑧ and ⑩ with a flat blade screwdriver and adjust the input gain to the point where there maximum volume with no distortion.

Status Monitor

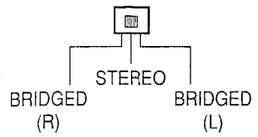
This indicator lights green when the power is on. The 3558 has built-in protection circuitry. If, for some reason, this protection circuit is activate the indicator turns orange. If this happens, turn the system off, find the of the problem and remedy the situation. This includes checking all you connections and wiring. If the indicator remains orange when the syste turned on, consult your authorized Alpine dealer.

NOTE:

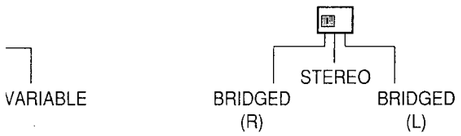
The indicator will illuminate in orange for a few seconds when the power is turned on as the protection circuit will be activated. This is normal.

SWITCH SETTINGS

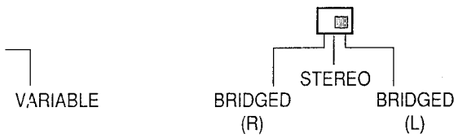
ıes ⑬ and ⑭:
ɜEO" position (center) when the amplifier is used as a
o system.



ABLE" and "BRIDGED(R)" positions when the ampli-
ght channel of bridged system.



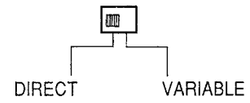
ABLE" and "BRIDGED(L)" positions when the
for left channel of bridged system.



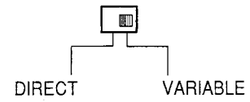
SWITCH SETTINGS

DIRECT/VARIABLE Input Selector Switches ⑦ and ⑨:

a) Set to the "DIRECT" position when connecting the 3558 to other Alpine products. This position sets the input sensitivity to 500 mV which corresponds to the pre-amp output of Alpine products when the amplifier is used as a stereo system.
Set to the " VARIABLE" position if the amplifier is used for bridged system.



b) Set to the "VARIABLE" position when connecting the 3558 to a non-Alpine product with an output voltage other than 500 mV. This position should also be used when adjustment of input sensitivity is required to obtain certain imaging requirements or to compensate for different speaker efficiencies.



Input Gain Adjustment Controls
After setting your head unit's volume 1/4 of a turn down from the maximum output level, rotate the Input Gain Adjustment Controls ⑧ and ⑩ with a #0 flat blade screwdriver and adjust the input gain to the point where there is maximum volume with no distortion.

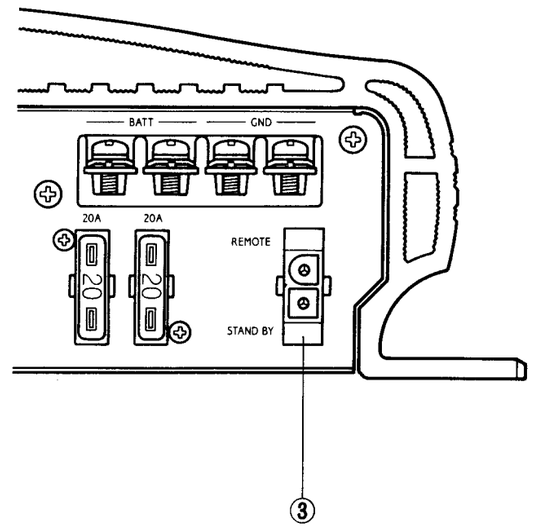
Status Monitor
This indicator lights green when the power is on. The 3558 has built-in protection circuitry. If, for some reason, this protection circuit is activated, the indicator turns orange. If this happens, turn the system off, find the cause of the problem and remedy the situation. This includes checking all your connections and wiring. If the indicator remains orange when the system is turned on, consult your authorized Alpine dealer.

NOTE:
The indicator will illuminate in orange for a few seconds when the power is turned on as the protection circuit will be activated. This is normal.

SWITCH SETTINGS

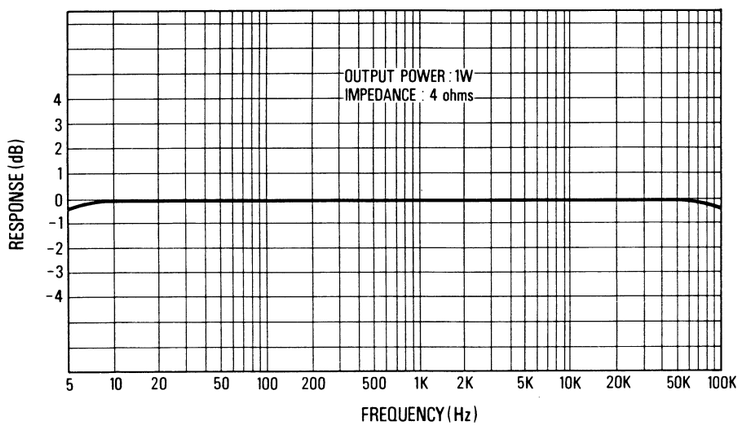
Mute Indicator
The Mute Indicator ⑮ will illuminate in orange for 10 seconds just after the power of the head unit connected to this amplifier is turned on, or the Status Monitor ⑯ (protection circuit indicator) is turned in orange for some reasons or the cause of abnormality is released. In other normal conditions, the mute indicator will illuminate in green.
The amplifier is in standby condition when the mute indicator illuminate in orange and no sound is available for that period.

STAND BY Connector ③
When the STANDBY Connector is used with an Alpine's head unit with standby display function, the connector allowing the head unit to display the amplifier is in standby condition when the amplifier is in mute mode.
When the connector is used with the head unit with standby display function, use the REMOTE/STANDBY connection cable supplied with the head unit.

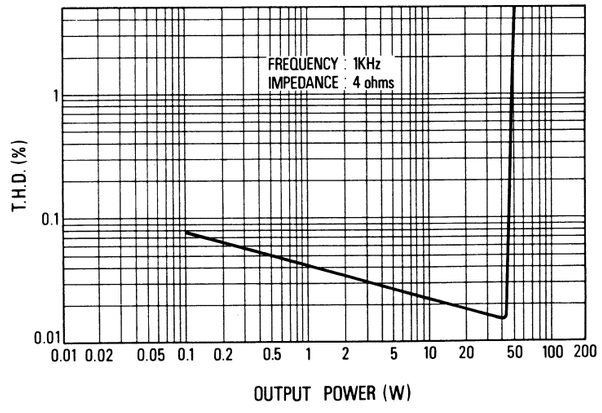


CHARACTERISTIC CURVES

FREQUENCY RESPONSE CURVE



POWER VS. DISTORTION CURVE



MEMO

Disassembly Instructions

1. Removal of Chassis Side (R)

(1) After removal of the Bottom Cover, remove four screws marked "○" as shown in Figure 1.
(2) Disconnect the connector from Fuse P.C.Board.
Chassis Side (R) with Fuse and Power P.C.Boards will be removed.

2. Removal of Fuse P.C.Board

(1) After removal of the Chassis Side (R), remove two screws marked "×" as shown in Figure 2.
(2) Remove six Hooks (A) as shown in Figure 2.

3. Removal of Chassis Side (L)

(1) After removal of the Bottom Cover, remove two screws marked "△" as shown in Figure 3.
(2) Disconnect all connectors from RCA, Speaker and Switch P.C.Boards.
Chassis Side (L) with RCA, Speaker and Switch P.C.Boards will be removed.

4. Removal of Common P.C.Board

(1) After removal of Chassis Side (R), remove four screws marked "□" as shown in Figure 1.
(2) Disconnect all connectors from Common P.C.Board.

5. Removal of Fan Motor

(1) After removal of Common P.C.Board, remove three screws marked "●" as shown in Figure 4.
Fan Motor with Fan Bracket will be removed.

6. Removal of Main · Front P.C.Board

(1) After removal of Fan Motor and Chassis Side (L), remove three screws marked "▲" as shown in Figure 4.
(2) Disconnect all connectors from Main · Front P.C.Board.
Main · Front P.C.Board with Pre (1) and Pre (2) P.C.Boards will be removed.

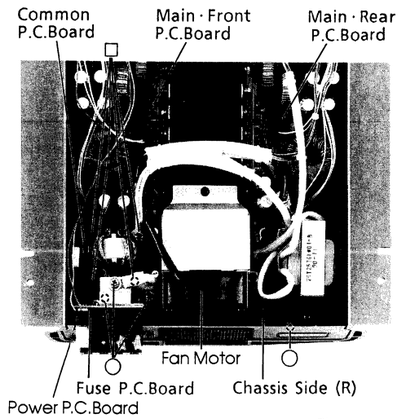


Figure 1

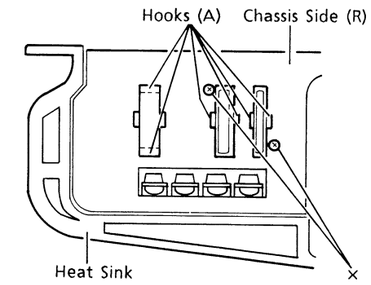


Figure 2

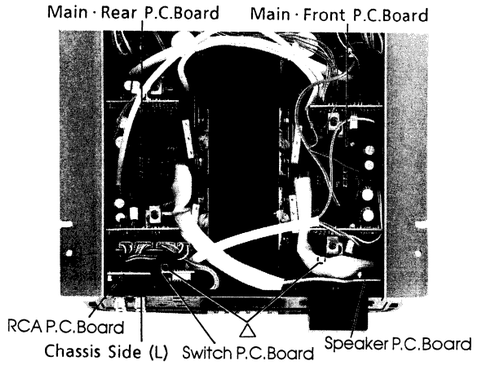


Figure 3

7. Removal of Pre (1) P.C.Board

(1) After removal of Main · Front P.C.Board, remove solder (B) as shown in Figure 5.
(2) Disconnect the connector between Pre (1) P.C.Board and Main · Front P.C.Board.

8. Removal of Pre (2) P.C.Board

(1) After removal of Main · Front P.C.Board, remove solder (C) as shown in Figure 5.
(2) Disconnect the connector between Pre (2) P.C.Board and Main · Front P.C.Board.

9. Removal of Main · Rear P.C.Board

(1) After removal of Fan Motor and Chassis Side (L), remove three screws marked "■" as shown in Figure 4.
(2) Disconnect all connectors from Main · Rear P.C.Board.
Main · Rear P.C.Board with Audio, Pre (3) and Pre (4) P.C.Boards will be removed.

10. Removal of Audio P.C.Board

(1) After removal of Main · Rear P.C.Board, remove solder (D) as shown in Figure 6.
(2) Disconnect the connector between Audio P.C.Board and Main · Rear P.C.Board.

11. Removal of Pre (3) P.C.Board

(1) After removal of Main · Rear P.C.Board, remove solder (E) as shown in Figure 6.
(2) Disconnect the connector between Pre (3) P.C.Board and Main · Rear P.C.Board.

12. Removal of Pre (4) P.C.Board

(1) After removal of Main · Rear P.C.Board, remove solder (F) as shown in Figure 6.
(2) Disconnect the connector between Pre (4) P.C.Board and Main · Rear P.C.Board.

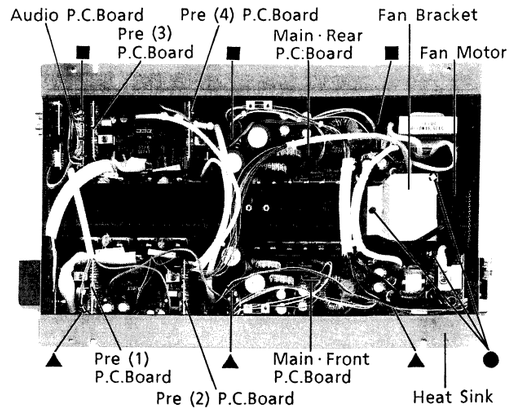


Figure 4

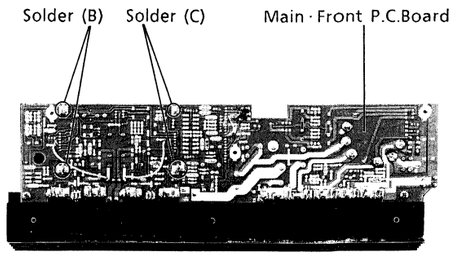


Figure 5

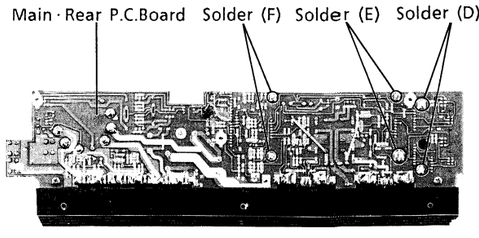


Figure 6

Adjustment Procedures

1. Power Supply Voltage Adjustment

(1) Connections

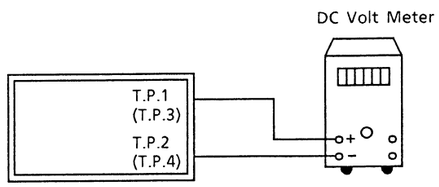


Figure 7

(2) Adjustment Procedures

① Front Side : Adjust VR701 so that voltage between T.P.1 and T.P.2 reaches 45V ± 0.5V.

② Rear Side : Adjust VR801 so that voltage between T.P.3 and T.P.4 reaches 45V ± 0.5V.

2. Idling Adjustment

(1) Connections

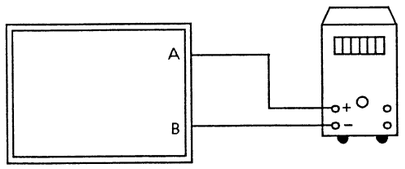


Figure 8

	A	B
Step 1	T.P.5	T.P.6
Step 2	T.P.7	T.P.8
Step 3	T.P.9	T.P.10
Step 4	T.P.11	T.P.12

(2) Adjustment Procedures

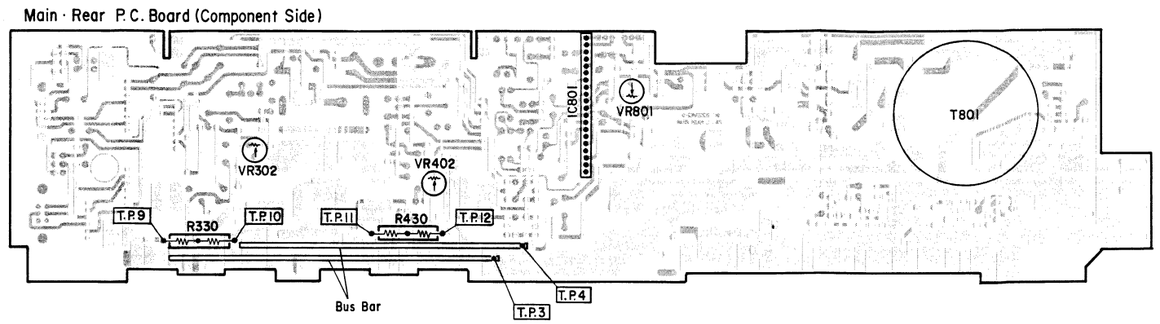
① Front · Lch Side : Adjust VR102 so that voltage between T.P.5 and T.P.6 reaches 25mV ± 1mV.

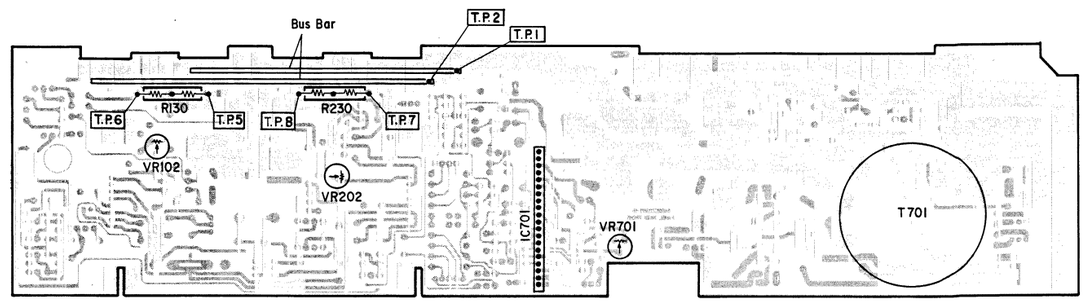
② Front · Rch Side : Adjust VR202 so that voltage between T.P.7 and T.P.8 reaches 25mV ± 1mV.

③ Rear · Lch Side : Adjust VR302 so that voltage between T.P.9 and T.P.10 reaches 25mV ± 1mV.

④ Rear · Rch Side : Adjust VR402 so that voltage between T.P.11 and T.P.12 reaches 25mV ± 1mV.

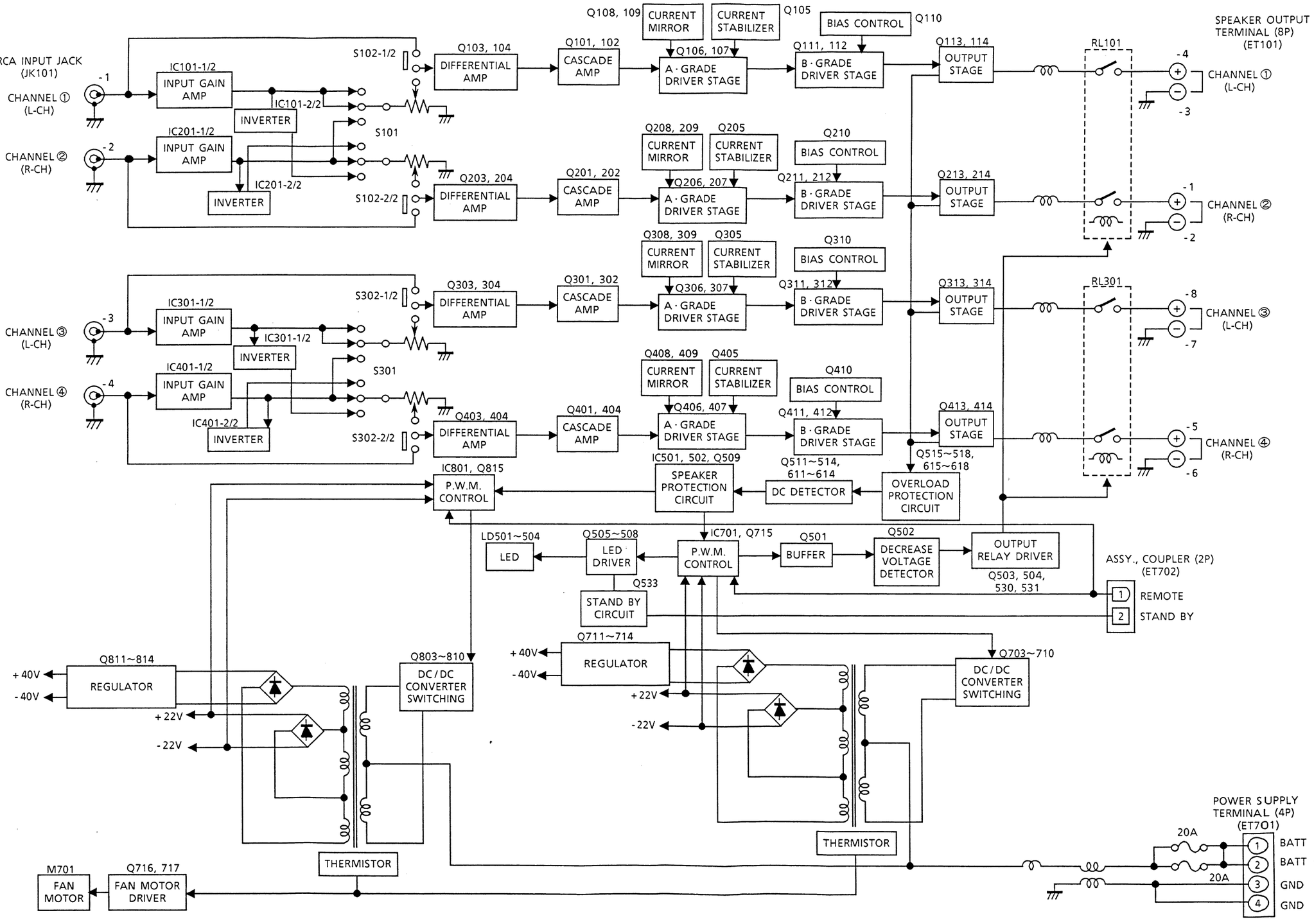
Adjustment Locations





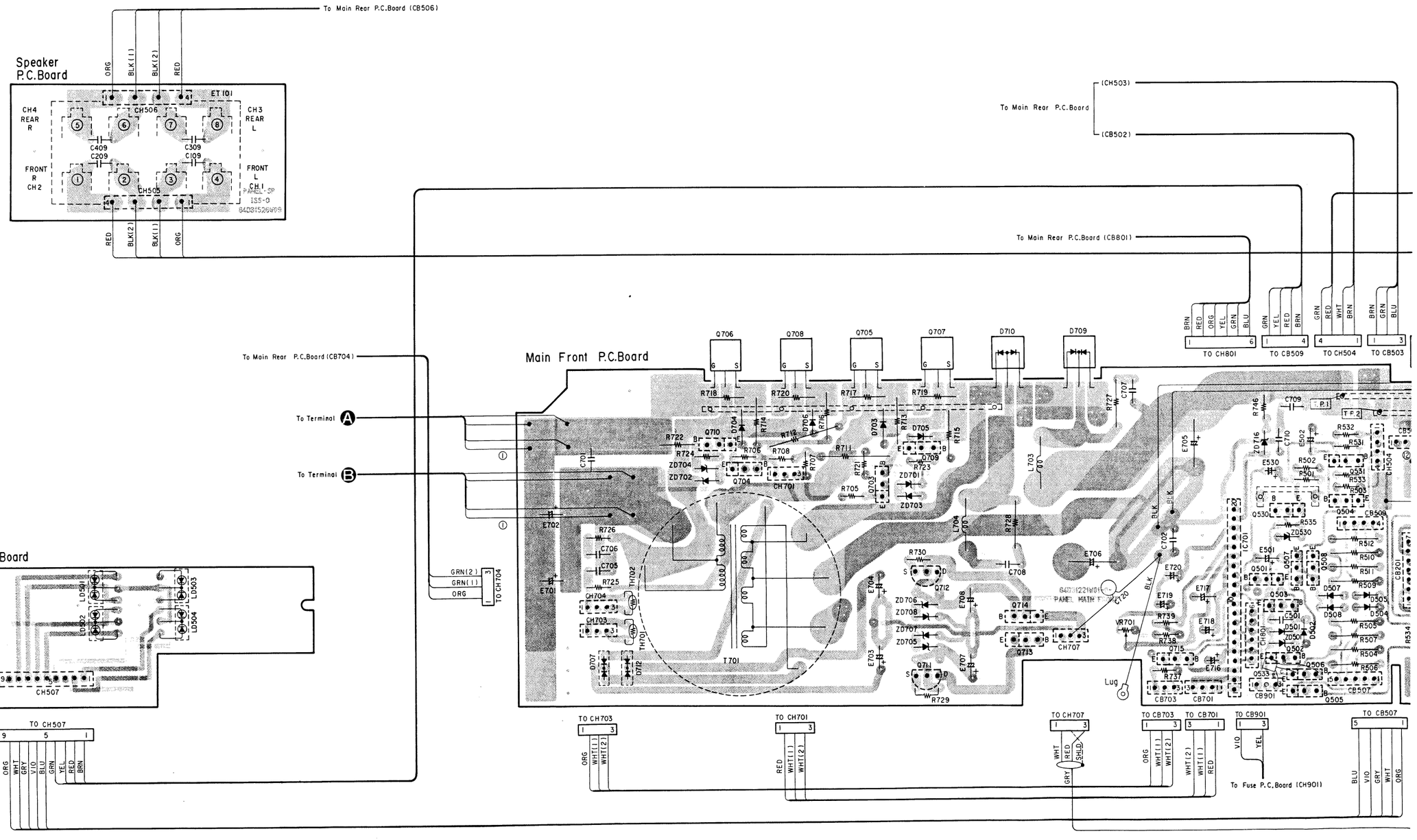
Main · Front P.C. Board (Component Side)

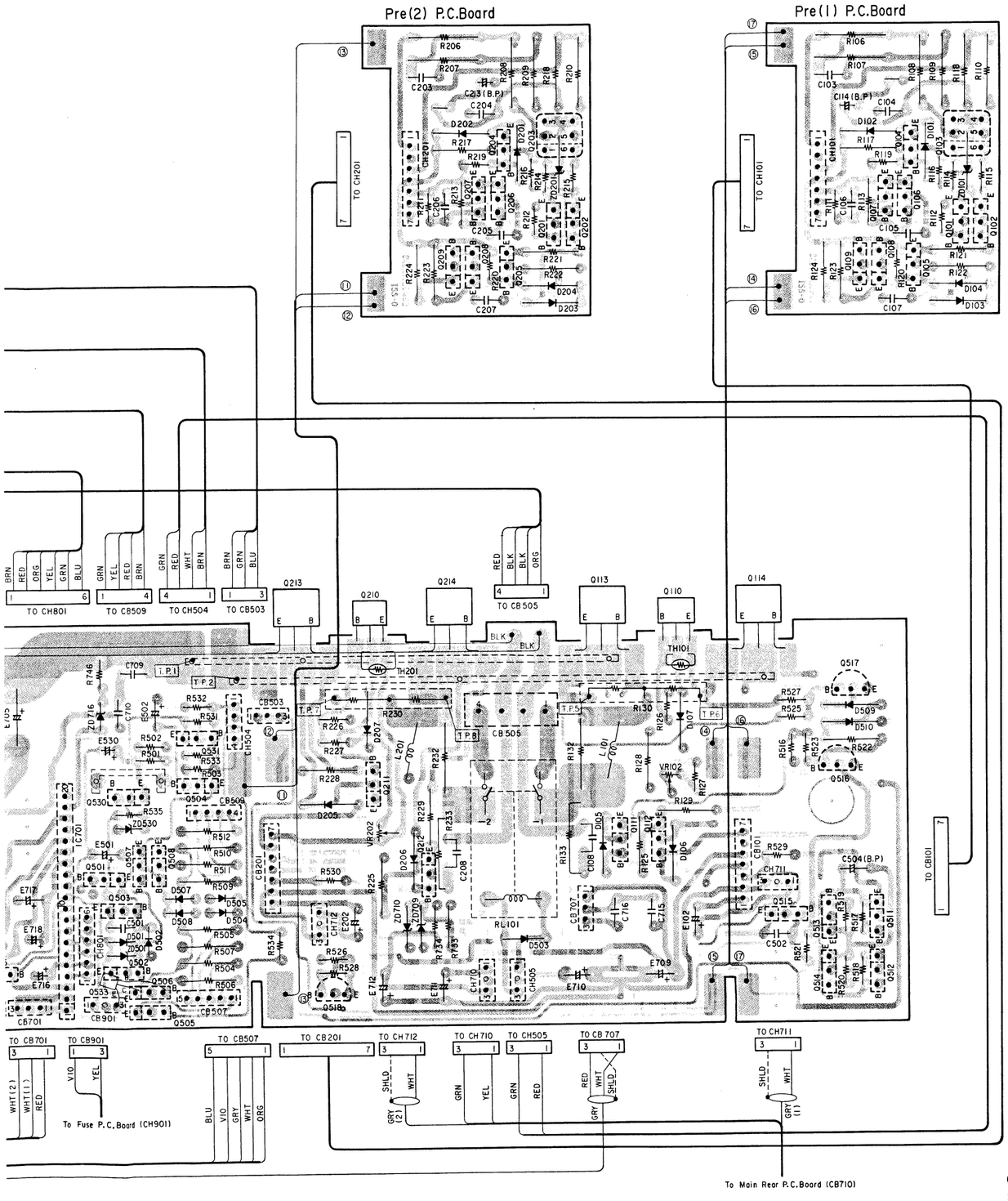
Block Diagram



Parts Layout on P.C.Boards and Wiring Diagram (1/2)

All P.C.Boards viewed from soldered side.

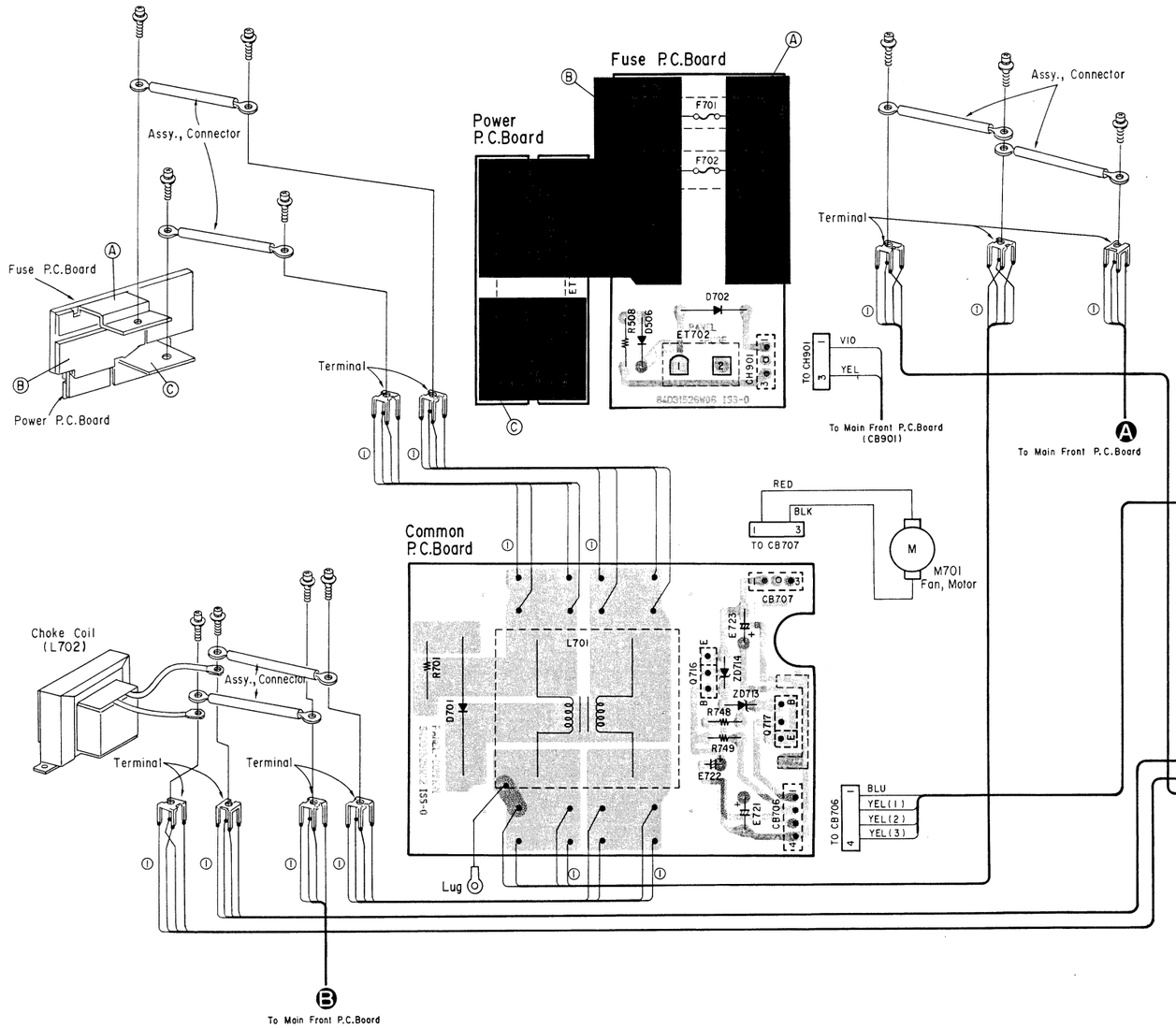


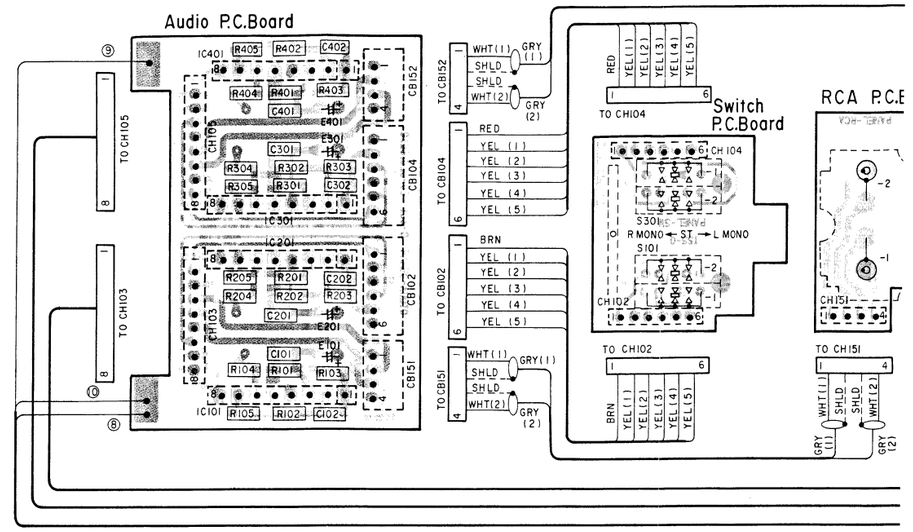


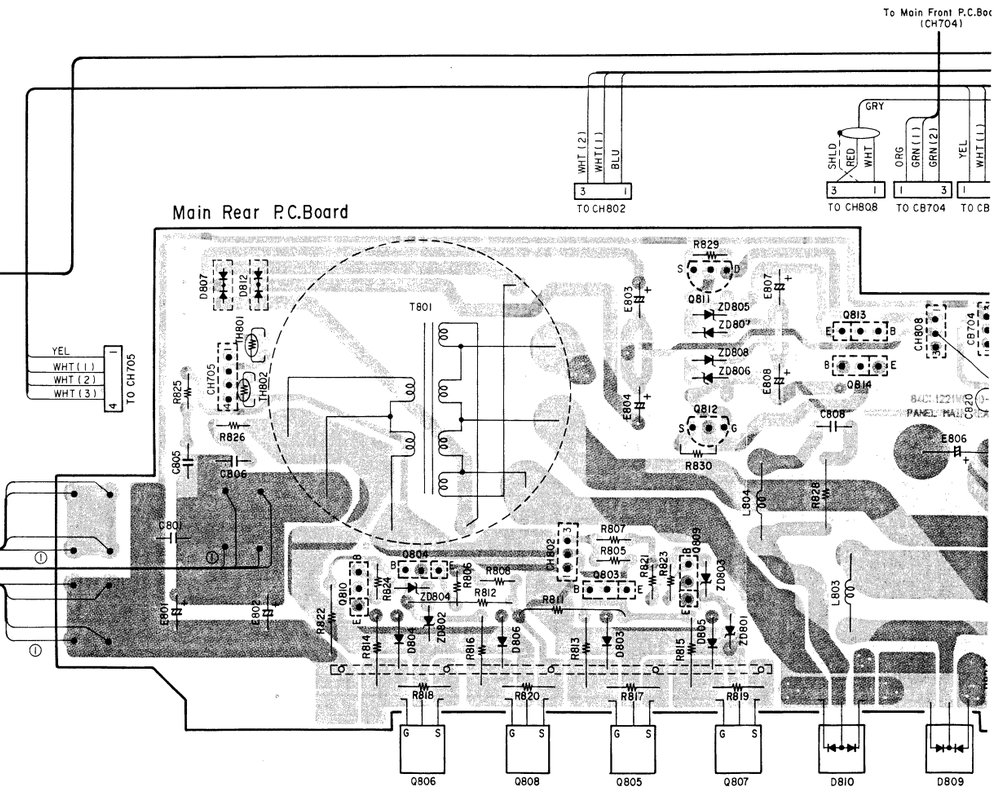
Orange Pattern : Component Side Pattern
Blue Pattern : Foil Side Pattern

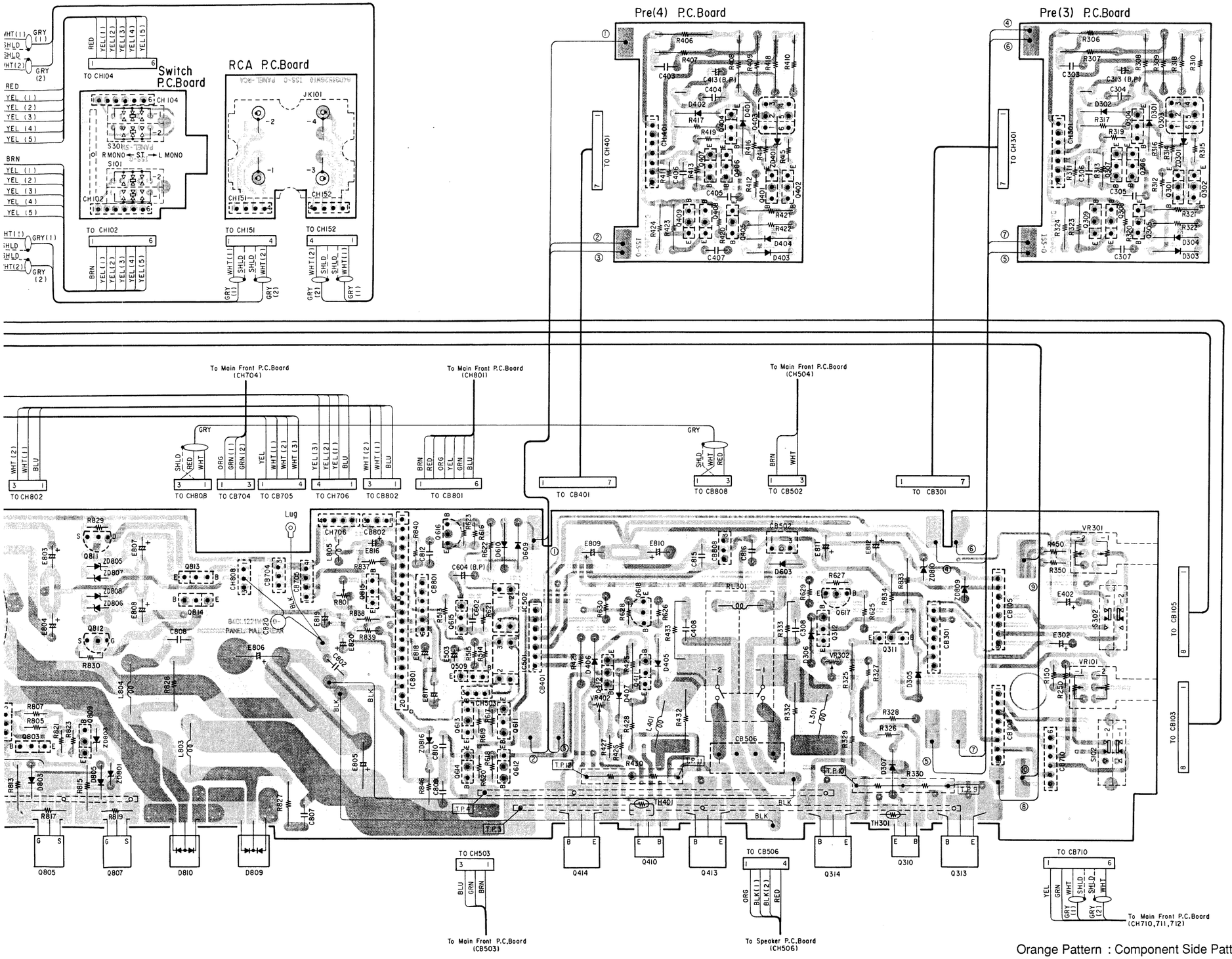
Parts Layout on P.C.Boards and Wiring Diagram (2/2)

All P.C.Boards viewed from soldered side.









Orange Pattern : Component Side Pattern
Blue Pattern : Foil Side Pattern

Schematic Diagram (1/2)

NOTE:
1. All resistance values are in ohm
2. All capacitance values are in mic

IC	IC101 IC201 IC301 IC401
Transistor (Q)	Q101 Q102 Q103 Q104 Q105 Q106 Q107 Q108 Q109 Q110 Q111 Q112 Q517 Q113 Q114 Q201 Q202 Q203 Q204 Q205 Q206 Q207 Q208 Q209 Q210 Q211 Q212 Q518 Q213 Q214 Q301 Q302 Q303 Q304 Q305 Q306 Q307 Q308 Q309 Q310 Q311 Q312 Q617 Q313 Q314 Q401 Q402 Q403 Q404 Q405 Q406 Q407 Q408 Q409 Q410 Q411 Q412 Q618 Q413 Q414

IC5

Q516 Q515 Q513 Q514 Q512 Q511
Q616 Q615 Q613 Q614 Q612 Q611

Audio P.C.Board
RCA P.C.Board
JK101-1 1ch-L
JK101-2 2ch-R
JK101-3 3ch-L
JK101-4 4ch-R
JK101 Jack, RCA Input (4P)
INPUT GAIN AMP
IC101 M5238L
IC201 M5238L
IC301 M5238L
IC401 M5238L
INVERTER
Switch P.C.Board (1/4)
Switch P.C.Board (2/4)
Switch P.C.Board (3/4)
Switch P.C.Board (4/4)
S101 INPUT MODE 1/2CH
S301 INPUT MODE 3/4CH
S102 INPUT SENSITIVITY
Main Front P.C.Board (1/3)
Main Rear P.C.Board (1/3)
(+16V)
(-16V)

Pre (1) P.C.Board
Q101,102 2SC3423 CASCADE AMP
Q103,104 2SK146 2SC3423 DIFFERENTIAL AMP
Q105 2SA1360 CURRENT STABILIZER
Q106,107 2SA1360 A.GRADE DRIVER STAGE
ZD101 HZ7B2L
D101,102 ISS82
D103,104 ISS82
Q108,109 2SC3423 CURRENT MIRROR

Pre (2) P.C.Board
Q201,202 2SC3423 CASCADE AMP
Q203,204 2SK146 2SC3423 DIFFERENTIAL AMP
Q205 2SA1360 CURRENT STABILIZER
Q206,207 2SA1360 A.GRADE DRIVER STAGE
ZD201 HZ7B2L
D201,202 ISS82
D203,204 ISS82
Q208,209 2SC3423 CURRENT MIRROR

Pre (3) P.C.Board
Q301,302 2SC3423 CASCADE AMP
Q303,304 2SK146 2SC3423 DIFFERENTIAL AMP
Q305 2SA1360 CURRENT STABILIZER
Q306,307 2SA1360 A.GRADE DRIVER STAGE
ZD301 HZS7B2L
D301,302 ISS82
D303,304 ISS82
Q308,309 2SC3423 CURRENT MIRROR

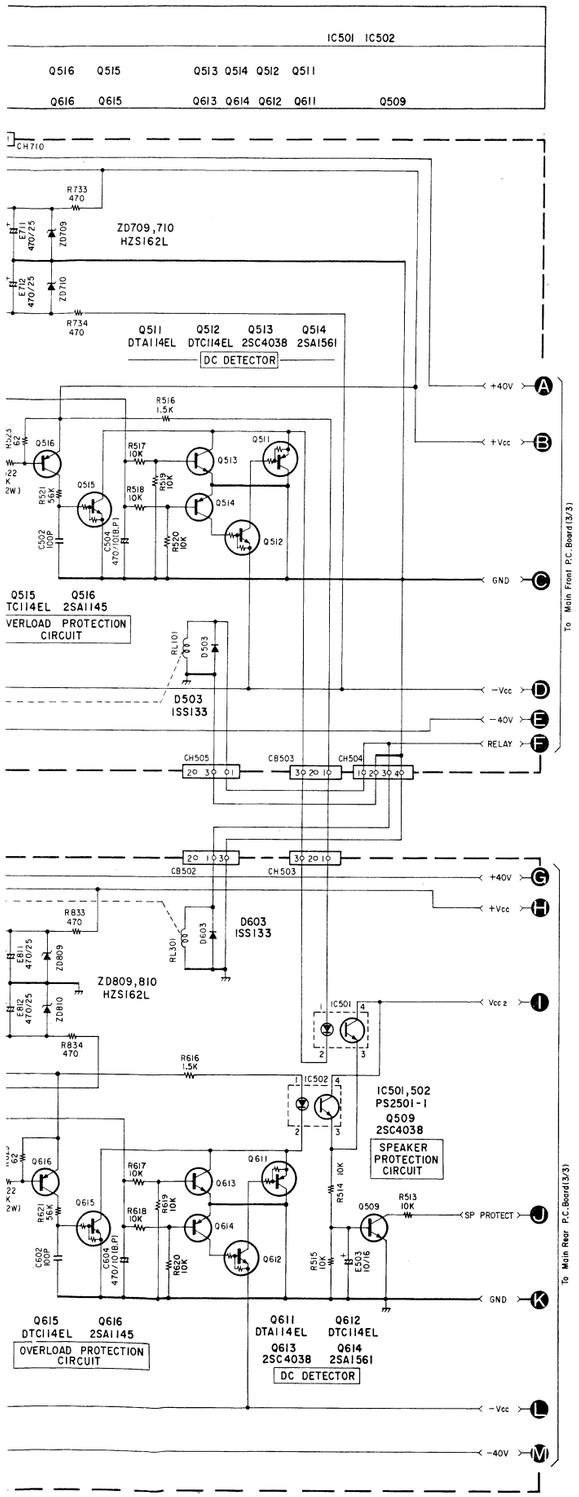
Pre (4) P.C.Board
Q401,402 2SC3423 CASCADE AMP
Q403,404 2SK146 2SC3423 DIFFERENTIAL AMP
Q405 2SA1360 CURRENT STABILIZER
Q406,407 2SA1360 A.GRADE DRIVER STAGE
ZD401 HZS7B2L
D401,402 ISS82
D403,404 ISS82
Q408,409 2SC3423 CURRENT MIRROR

Main Front P.C.Board (2/3)
D105~107 ISS82
Q110,210 2SC3423 BIAS CONTROL
Q111,211 Q112,212 2SC3421 2SA1358 B.GRADE DRIVER STAGE
D509,510 ISS82
Q113,213 Q114,214 2SC4388 2SA1673 OUTPUT STAGE
Speaker P.C.Board (1/4)
Speaker P.C.Board (2/4)
Q515 Q516 DTC114EL 2SA1145 OVERLOAD PROTECTION CIRCUIT
D205~207 ISS82
Q517,518 2SC2705 OVERLOAD PROTECTION CIRCUIT
D503 ISS133
ZD709,710 HZS162L
Q511 Q512 Q513 Q514 DTA114EL DTC114EL 2SC4038 2SA1561 DC DETECTOR

Main Rear P.C.Board (2/3)
D305~307 ISS82
Q310,410 2SC3423 BIAS CONTROL
Q311,411 Q312,412 2SC3421 2SA1358 B.GRADE DRIVER STAGE
D609,610 ISS82
Q313,413 Q314,414 2SC4388 2SA1673 OUTPUT STAGE
Speaker P.C.Board (3/4)
Speaker P.C.Board (4/4)
Q615 Q616 DTC114EL 2SA1145 OVERLOAD PROTECTION CIRCUIT
D405~407 ISS82
Q617,618 2SC2705 OVERLOAD PROTECTION CIRCUIT
D603 ISS133
ZD809,810 HZS162L
Q611 Q612 Q613 Q614 DTA114EL 2SC4038 DC DETEC

ET101 Speaker Output Terminal (8P)

NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000



Pin No. \ Ref.No.	IC101	IC201	IC301	IC401
1	−21mV	−16mV	22mV	−15.3mV
2	−4.2mV	−3.2mV	4.6mV	−2.9mV
3	0.2mV	0.2mV	−0.8mV	−0.5mV
4	−16.64V	−16.64V	−16.41V	−16.41V
5	0V	0V	0V	0V
6	0.64mV	3.59mV	−0.95mV	−2.8mV
7	22.1mV	22.9mV	−24.0V	9.5mV
8	16.69V	16.69V	16.43V	16.43V

Pin No. \ Ref.No.	IC501	IC502
1	22.5V	22.6V
2	21.78V	21.9V
3	40.5mV	*40.5mV
4	14.08V	*14.08V

Pin No. \ Ref. No.	Q103	Q203	Q303	Q403
1	6.5V	6.6V	6.6V	6.54V
2	0.37mV	0.81mV	0.4mV	0.46mV
3	0.26V	0.35V	0.36V	0.32V
4	6.5V	6.6V	6.6V	6.54V
5	7.9mV	1.6mV	3.2mV	5.1mV
6	0.26v	0.35v	0.36V	0.32V

Pin Name \ Ref. No.	Q101	Q102	Q104	Q105	Q106	Q107	Q108
B	7.49V	7.49V	−39.6V	39.8V	30.4V	30.4V	−39.8V
C	29.8V	29.8V	−4.18V	30.4V	9.71V	1.18V	−39.8V
E	6.89V	6.9V	−40.2V	40.4V	29.5V	29.5V	−40.5V

Pin Name \ Ref. No.	Q109	Q110	Q111	Q112	Q113	Q114
B	−39.8V	−0.49V	1.18V	−1.16V	0.59V	−0.59V
C	−1.16V	1.18V	22.6V	−22.4V	22.6V	−22.4V
E	−40.5V	−1.16V	0.6V	−0.6V	23.1mV	−7.2mV

Pin Name \ Ref. No.	Q201	Q202	Q204	Q205	Q206	Q207	Q208	Q209	Q210	Q211	Q212	Q213	Q214
B	7.59V	7.59V	−39.7V	39.8V	30.9V	30.9V	−39.9V	−39.9V	−0.5V	1.17V	−1.16V	0.59V	−0.59V
C	30.3V	30.3V	−4.04V	30.9V	8.31V	1.17V	−39.9V	−1.16V	1.17V	22.6V	−22.4V	22.6V	−22.4V
E	7V	7V	−40.2V	40.4V	30.3V	30.3V	−40.5V	−40.5V	−1.16V	0.61V	−0.61V	18.5mV	−16.1mV

Pin Name \ Ref. No.	Q301	Q302	Q304	Q305	Q306	Q307	Q308	Q309	Q310	Q311	Q312	Q313	Q314
B	7.59V	7.59V	−39.8V	40.4V	30.8V	30.8V	−39.9V	−39.9V	−0.49V	1.16V	−1.15V	0.59V	−0.59V
C	30.28V	30.3V	−3.84V	30.8V	7.4V	1.16V	−39.9V	−1.15V	1.16V	22.6V	−22.25V	22.6V	−22.25V
E	7V	7V	−40.5V	41V	30.6V	30.6V	−40.6V	−40.6V	−1.15V	0.59V	−0.6V	18.1mV	−12.5mV

Pin Name \ Ref. No.	Q401	Q402	Q404	Q405	Q406	Q407	Q408	Q409	Q410	Q411	Q412	Q413	Q414
B	7.55V	7.55V	−39.9V	40.4V	30.97V	30.97V	−39.9V	−39.9V	−0.5V	1.16V	−1.15V	0.58V	−0.59V
C	30.4V	30.4V	−3.76V	30.97V	6.58V	1.16V	−39.9V	−1.15V	1.16V	22.6V	−22.25V	22.6V	−22.25V
E	6.95V	6.95V	−40.5V	41V	31.1V	31.1V	−40.6V	−40.56V	−1.15V	0.59V	−0.59V	18.7mV	−9.3mV

Pin Name \ Ref. No.	Q509	Q511	Q512	Q513	Q514	Q515	Q516	Q517	Q518
B	*40mV	21.8V	−22.1V	1.38mV	1.4m	0.05V	22.69V	4.3mV	−3.4mV
C	*5.04V	0V	21.8V	21.78V	−22.1V	21.78V	−0.2V	22.4V	22.4V
E	*0V	21.78V	−22.4V	0V	0V	0V	22.6V	−6.3V	−16.1mV

Pin Name \ Ref. No.	Q611	Q612	Q613	Q614	Q615	Q616	Q617	Q618
B	21.86V	−21.8V	1.22mV	1.23mV	0.08mV	22.6V	−1.09mV	0.91mV
C	0V	21.86V	21.9V	−21.8V	21.9V	0.07mV	22.35V	22.36V
E	21.9V	−22.25V	0V	0V	0V	22.6V	−12.4mV	−9.4mV

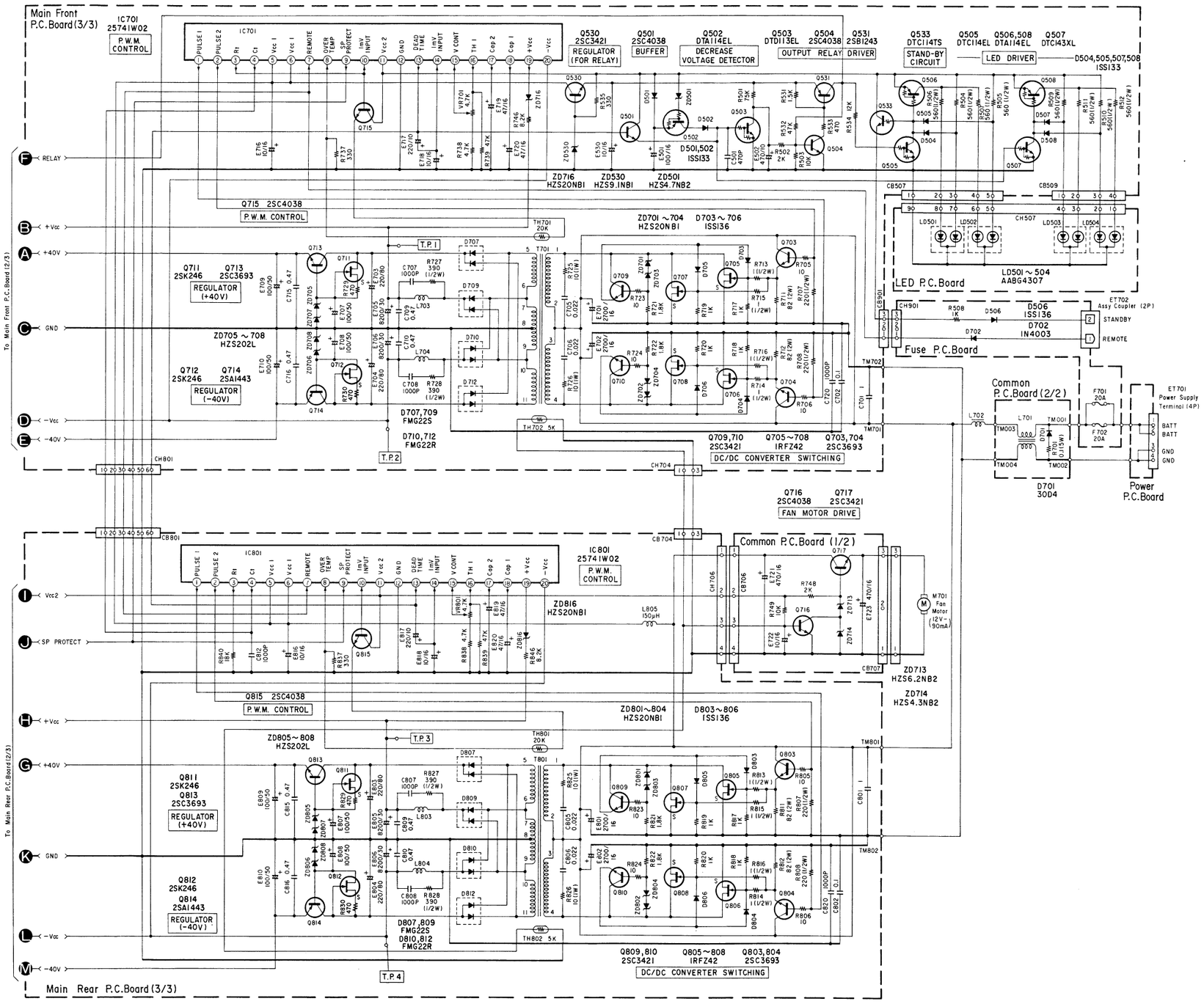
● Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Volt Meter
3. Measuring Point Reference : Primary Ground (marked *)
   : Secondary Ground (others)
4. Measuring Condition : No Signal Input

Schematic Diagram (2/2)

NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000

IC	IC701 IC801
Transistor (Q)	Q715 Q713 Q714 Q711 Q712 Q815 Q813 Q814 Q811 Q812 Q530 Q501 Q502 Q503 Q504 Q531 Q533 Q505 Q506 Q507 Q508 Q709 Q710 Q707 Q708 Q705 Q706 Q703 Q704 Q716 Q717 Q809 Q810 Q807 Q808 Q805 Q806 Q803 Q804



Pin No. \ Ref.No.	IC701	IC801
1	*0.58V	*0.59V
2	*0.58V	*0.59V
3	*5.02V	*3.87V
4	*1.78V	*1.78V
5	*14.2V	*14.2V
6	*14.2V	*14.2V
7	*13.79V	*13.79V
8	*174.8mV	*188.4mV
9	*5.05V	*5.05V
10	*5.02V	*5.07V
11	*13.66V	*14.09V
12	*0V	*0V
13	*65.4mV	65.4mV
14	*5.02V	*5.07V
15	*0.98V	*0.98V
16	1.42V	*1.38V
17	*11.3V	*11.3V
18	*10.68V	*10.69V
19	–21.25V	–21.03V
20	–22.4V	–22.25V

Pin Name \ Ref. No.	
S	
D	
G	

Pin Name \ Ref. No.	Q501	Q502	Q503	Q504	Q505	Q
B	*65.2mV	*13.51V	*53mV	*0.71V	*4.12V	*(
C	*13.66V	*–0.66V	*0.91V	*173.8mV	*0.26V	*13
E	*53mV	*13.52V	*0V	*0V	*0V	*13

Pin Name \ Ref. No.	Q703	Q704	Q709	Q710	Q713	Q7
B	*0.58V	*0.58V	*12.7mV	*10.7mV	41V	–4
C	*14.3V	*14.3V	*Pulse	*Pulse	58.3V	–5
E	*0.6V	*0.6V	*–191mV	*–143mV	40.6V	–4

Pin Name \ Ref. No.	Q803	Q804	Q809	Q810	Q813	Q8
B	*0.58V	*.058V	*15.3mV	*14.5mV	41.5V	–4
C	*14.3V	*14.3V	*Pulse	*Pulse	58.2V	–5
E	*0.6V	*0.6V	*–219V	–130mV	41.2V	–4

● Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Volt Meter
3. Measuring Point Reference : Primary Ground (marked *)
   : Secondary Ground (others)
4. Measuring Condition : No Signal Input

701	IC801
0.58V	*0.59V
0.58V	*0.59V
5.02V	*3.87V
1.78V	*1.78V
14.2V	*14.2V
14.2V	*14.2V
3.79V	*13.79V
.8mV	*188.4mV
5.05V	*5.05V
5.02V	*5.07V
3.66V	*14.09V
*0V	*0V
.4mV	65.4mV
5.02V	*5.07V
0.98V	*0.98V
1.42V	*1.38V
11.3V	*11.3V
0.68V	*10.69V
1.25V	–21.03V
22.4V	–22.25V

Pin Name \ Ref. No.	Q711	Q712	Q811	Q812	Q705 ~ 708	Q805 ~ 808
S	41.17V	–58.1V	41.66V	–58V	*0V	*0V
D	58.3V	–41.3V	58.2V	–41.1V	*Pulse	*Pulse
G	41V	–58.3V	41.5V	–58.2V	*0.61V	*0.62V

Q501	Q502	Q503	Q504	Q505	Q506	Q507	Q508	Q530	Q531	Q532
5.2mV	*13.51V	*53mV	*0.71V	*4.12V	*0.26V	*53mV	*13.58V	*8.87V	*7.64V	*0.26V
13.66V	*–0.66V	*0.91V	*173.8mV	*0.26V	*13.39V	*13.58V	*0.97V	*14.2V	*8.28V	*13.64V
*53mV	*13.52V	*0V	*0V	*0V	*13.64V	*0V	*13.64V	*8.31V	*8.31V	*0.6V

Q703	Q704	Q709	Q710	Q713	Q714	Q715	Q716	Q717
0.58V	*0.58V	*12.7mV	*10.7mV	41V	–41.3V	*5.02V	*0.74V	*8.1V
14.3V	*14.3V	*Pulse	*Pulse	58.3V	–53.3V	*13.64V	*49.7mV	*14.3V
*0.6V	*0.6V	*–191mV	*–143mV	40.6V	–40.9V	4.49V	*0V	*7.4V

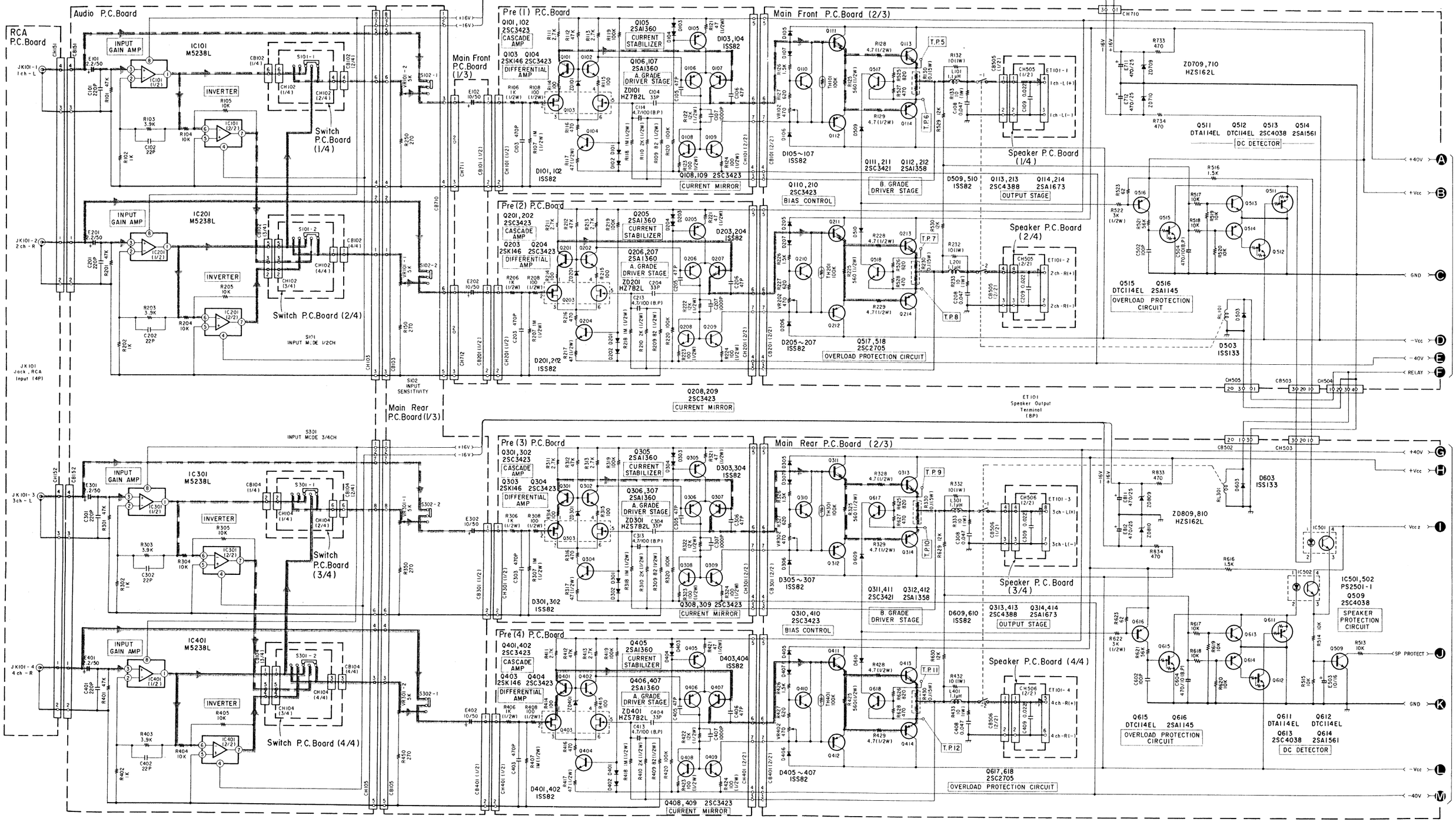
Q803	Q804	Q809	Q810	Q813	Q814	Q815
*0.58V	*.058V	*15.3mV	*14.5mV	41.5V	–41.1V	*5.07V
*14.3V	*14.3V	*Pulse	*Pulse	58.2V	–58.2V	*14.08V
*0.6V	*0.6V	*–219V	–130mV	41.2V	–40.8V	*4.52V

ng Condition
oltage : DC14.4V
r : Digital Volt Meter
Reference : Primary Ground (marked *)
: Secondary Ground (others)
lition : No Signal Input

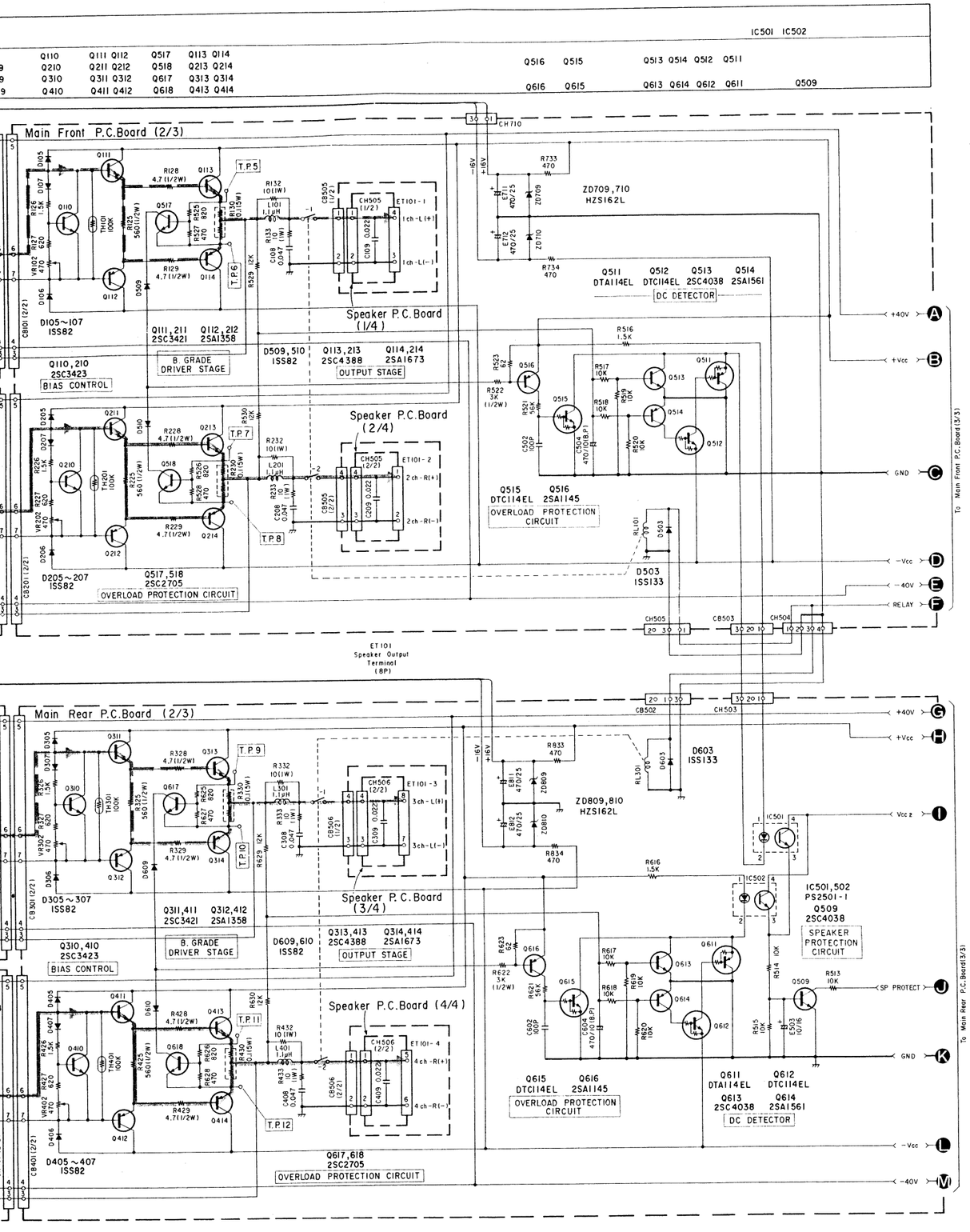
Schematic Diagram (1/2)

NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000

IC	IC101 IC201 IC301 IC401
Transistor (Q)	Q101 Q102 Q103 Q104 Q201 Q202 Q203 Q204 Q301 Q302 Q303 Q304 Q401 Q402 Q403 Q404 Q105 Q106 Q107 Q108 Q109 Q205 Q206 Q207 Q208 Q209 Q305 Q306 Q307 Q308 Q309 Q405 Q406 Q407 Q408 Q409 Q110 Q210 Q310 Q410 Q111 Q112 Q211 Q212 Q311 Q312 Q411 Q412 Q517 Q518 Q617 Q618 Q113 Q114 Q213 Q214 Q313 Q314 Q413 Q414 IC501 IC502 Q516 Q515 Q513 Q514 Q512 Q511 Q616 Q615 Q613 Q614 Q612 Q611 Q509



NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000



Pin No. \ Ref.No.	IC101	IC201	IC301	IC401
1	−21mV	−16mV	22mV	−15.3mV
2	−4.2mV	−3.2mV	4.6mV	−2.9mV
3	0.2mV	0.2mV	−0.8mV	−0.5mV
4	−16.64V	−16.64V	−16.41V	−16.41V
5	0V	0V	0V	0V
6	0.64mV	3.59mV	−0.95mV	−2.8mV
7	22.1mV	22.9mV	−24.0V	9.5mV
8	16.69V	16.69V	16.43V	16.43V

Pin No. \ Ref.No.	IC501	IC502
1	22.5V	22.6V
2	21.78V	21.9V
3	40.5mV	*40.5mV
4	14.08V	*14.08V

Pin No. \ Ref. No.	Q103	Q203	Q303	Q403
1	6.5V	6.6V	6.6V	6.54V
2	0.37mV	0.81mV	0.4mV	0.46mV
3	0.26V	0.35V	0.36V	0.32V
4	6.5V	6.6V	6.6V	6.54V
5	7.9mV	1.6mV	3.2mV	5.1mV
6	0.26v	0.35v	0.36V	0.32V

Pin Name \ Ref. No.	Q101	Q102	Q104	Q105	Q106	Q107	Q108
B	7.49V	7.49V	−39.6V	39.8V	30.4V	30.4V	−39.8V
C	29.8V	29.8V	−4.18V	30.4V	9.71V	1.18V	−39.8V
E	6.89V	6.9V	−40.2V	40.4V	29.5V	29.5V	−40.5V

Pin Name \ Ref. No.	Q109	Q110	Q111	Q112	Q113	Q114
B	−39.8V	−0.49V	1.18V	−1.16V	0.59V	−0.59V
C	−1.16V	1.18V	22.6V	−22.4V	22.6V	−22.4V
E	−40.5V	−1.16V	0.6V	−0.6V	23.1mV	−7.2mV

Pin Name \ Ref. No.	Q201	Q202	Q204	Q205	Q206	Q207	Q208	Q209	Q210	Q211	Q212	Q213	Q214
B	7.59V	7.59V	−39.7V	39.8V	30.9V	30.9V	−39.9V	−39.9V	−0.5V	1.17V	−1.16V	0.59V	−0.59V
C	30.3V	30.3V	−4.04V	30.9V	8.31V	1.17V	−39.9V	−1.16V	1.17V	22.6V	−22.4V	22.6V	−22.4V
E	7V	7V	−40.2V	40.4V	30.3V	30.3V	−40.5V	−40.5V	−1.16V	0.61V	−0.61V	18.5mV	−16.1mV

Pin Name \ Ref. No.	Q301	Q302	Q304	Q305	Q306	Q307	Q308	Q309	Q310	Q311	Q312	Q313	Q314
B	7.59V	7.59V	−39.8V	40.4V	30.8V	30.8V	−39.9V	−39.9V	−0.49V	1.16V	−1.15V	0.59V	−0.59V
C	30.28V	30.3V	−3.84V	30.8V	7.4V	1.16V	−39.9V	−1.15V	1.16V	22.6V	−22.25V	22.6V	−22.25V
E	7V	7V	−40.5V	41V	30.6V	30.6V	−40.6V	−40.6V	−1.15V	0.59V	−0.6V	18.1mV	−12.5mV

Pin Name \ Ref. No.	Q401	Q402	Q404	Q405	Q406	Q407	Q408	Q409	Q410	Q411	Q412	Q413	Q414
B	7.55V	7.55V	−39.9V	40.4V	30.97V	30.97V	−39.9V	−39.9V	−0.5V	1.16V	−1.15V	0.58V	−0.59V
C	30.4V	30.4V	−3.76V	30.97V	6.58V	1.16V	−39.9V	−1.15V	1.16V	22.6V	−22.25V	22.6V	−22.25V
E	6.95V	6.95V	−40.5V	41V	31.1V	31.1V	−40.6V	−40.56V	−1.15V	0.59V	−0.59V	18.7mV	−9.3mV

Pin Name \ Ref. No.	Q509	Q511	Q512	Q513	Q514	Q515	Q516	Q517	Q518
B	*40mV	21.8V	−22.1V	1.38mV	1.4m	0.05V	22.69V	4.3mV	−3.4mV
C	*5.04V	0V	21.8V	21.78V	−22.1V	21.78V	−0.2V	22.4V	22.4V
E	*0V	21.78V	−22.4V	0V	0V	0V	22.6V	−6.3V	−16.1mV

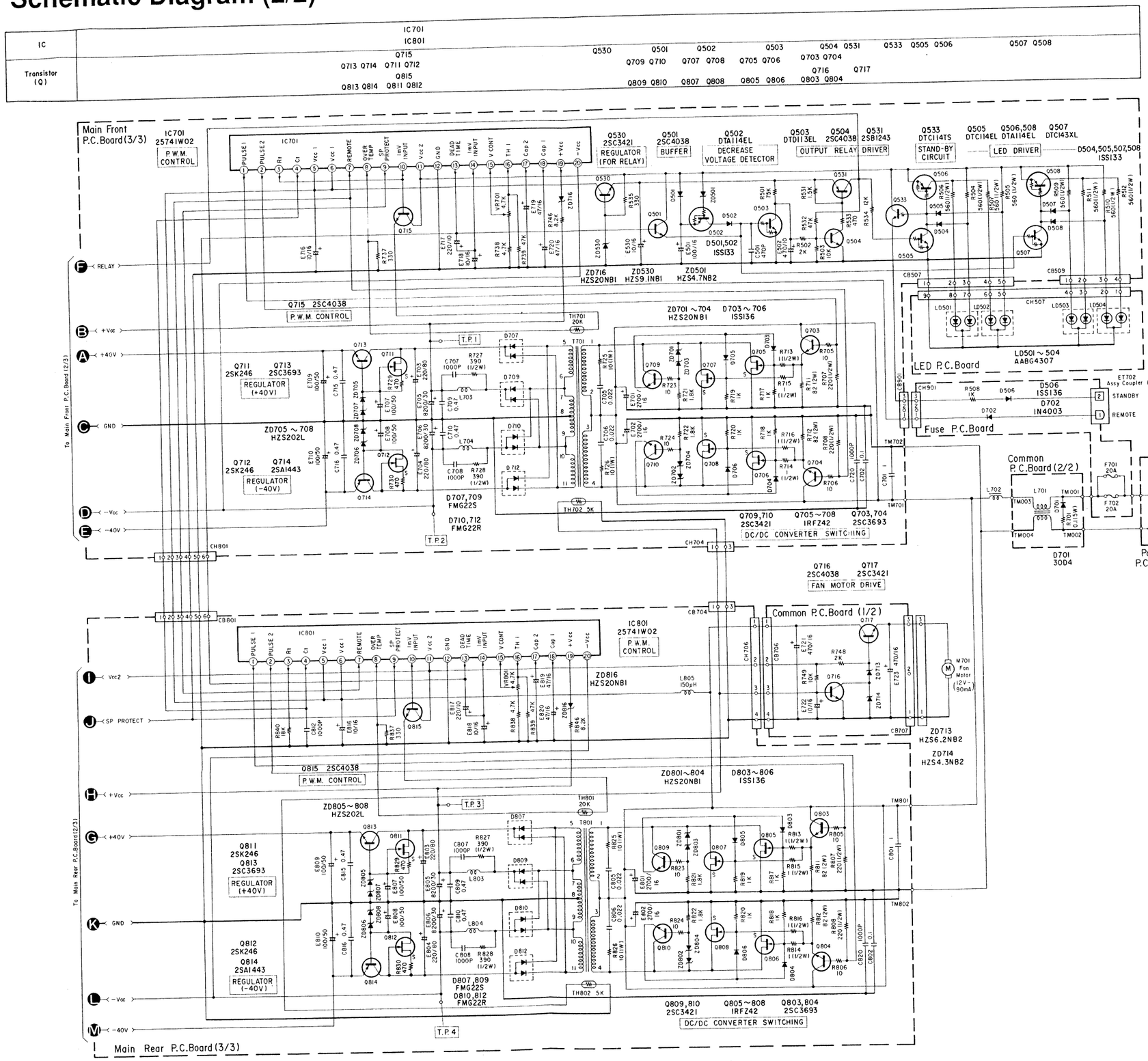
Pin Name \ Ref. No.	Q611	Q612	Q613	Q614	Q615	Q616	Q617	Q618
B	21.86V	−21.8V	1.22mV	1.23mV	0.08mV	22.6V	−1.09mV	0.91mV
C	0V	21.86V	21.9V	−21.8V	21.9V	0.07mV	22.35V	22.36V
E	21.9V	−22.25V	0V	0V	0V	22.6V	−12.4mV	−9.4mV

● Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Volt Meter
3. Measuring Point Reference : Primary Ground (marked *)
   : Secondary Ground (others)
4. Measuring Condition : No Signal Input

Schematic Diagram (2/2)

NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000



Ref.No. / Pin No.	IC701	IC801
1	*0.58V	*0.59V
2	*0.58V	*0.59V
3	*5.02V	*3.87V
4	*1.78V	*1.78V
5	*14.2V	*14.2V
6	*14.2V	*14.2V
7	*13.79V	*13.79V
8	*174.8mV	*188.4mV
9	*5.05V	*5.05V
10	*5.02V	*5.07V
11	*13.66V	*14.09V
12	*0V	*0V
13	*65.4mV	65.4mV
14	*5.02V	*5.07V
15	*0.98V	*0.98V
16	1.42V	*1.38V
17	*11.3V	*11.3V
18	*10.68V	*10.69V
19	–21.25V	–21.03V
20	–22.4V	–22.25V

Ref. No. / Pin Name	Q501	Q502	Q
B	*65.2mV	*13.51V	
C	*13.66V	*–0.66V	
E	*53mV	*13.52V	

Ref. No. / Pin Name	Q703	Q704	Q
B	*0.58V	*0.58V	*12
C	*14.3V	*14.3V	
E	*0.6V	*0.6V	*–1

Ref. No. / Pin Name	Q803	Q804	Q
B	*0.58V	*.058V	*1
C	*14.3V	*14.3V	
E	*0.6V	*0.6V	*

- Voltage Measuring Condition
1. Power Supply Voltage : DC1
2. Measuring Meter : Digi
3. Measuring Point Reference : Prim
: Sec
4. Measuring Condition : No

NOTE:
1. All resistance values are in ohms. K= 1,000 M= 1,000,000
2. All capacitance values are in microfarads. P= 1/1,000,000

Pin No. \ Ref.No.	IC701	IC801
1	*0.58V	*0.59V
2	*0.58V	*0.59V
3	*5.02V	*3.87V
4	*1.78V	*1.78V
5	*14.2V	*14.2V
6	*14.2V	*14.2V
7	*13.79V	*13.79V
8	*174.8mV	*188.4mV
9	*5.05V	*5.05V
10	*5.02V	*5.07V
11	*13.66V	*14.09V
12	*0V	*0V
13	*65.4mV	65.4mV
14	*5.02V	*5.07V
15	*0.98V	*0.98V
16	1.42V	*1.38V
17	*11.3V	*11.3V
18	*10.68V	*10.69V
19	–21.25V	–21.03V
20	–22.4V	–22.25V

Pin Name \ Ref. No.	Q711	Q712	Q811	Q812	Q705 ~ 708	Q805 ~ 808
S	41.17V	–58.1V	41.66V	–58V	*0V	*0V
D	58.3V	–41.3V	58.2V	–41.1V	*Pulse	*Pulse
G	41V	–58.3V	41.5V	–58.2V	*0.61V	*0.62V

Pin Name \ Ref. No.	Q501	Q502	Q503	Q504	Q505	Q506	Q507	Q508	Q530	Q531	Q532
B	*65.2mV	*13.51V	*53mV	*0.71V	*4.12V	*0.26V	*53mV	*13.58V	*8.87V	*7.64V	*0.26V
C	*13.66V	*–0.66V	*0.91V	*173.8mV	*0.26V	*13.39V	*13.58V	*0.97V	*14.2V	*8.28V	*13.64V
E	*53mV	*13.52V	*0V	*0V	*0V	*13.64V	*0V	*13.64V	*8.31V	*8.31V	*0.6V

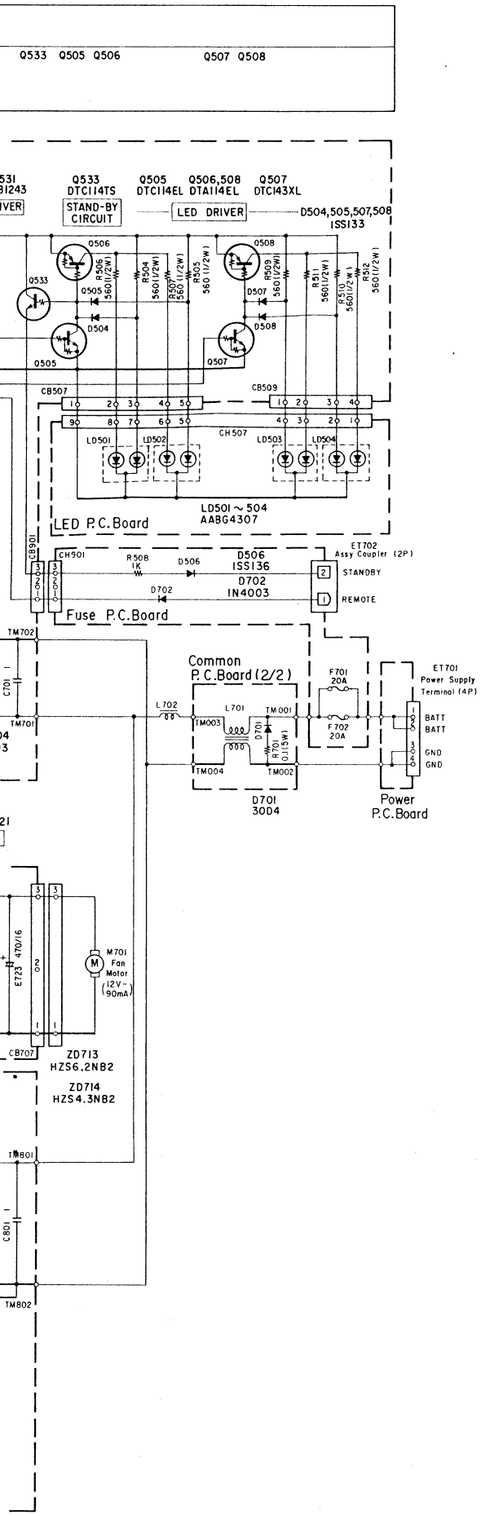
Pin Name \ Ref. No.	Q703	Q704	Q709	Q710	Q713	Q714	Q715	Q716	Q717
B	*0.58V	*0.58V	*12.7mV	*10.7mV	41V	–41.3V	*5.02V	*0.74V	*8.1V
C	*14.3V	*14.3V	*Pulse	*Pulse	58.3V	–53.3V	*13.64V	*49.7mV	*14.3V
E	*0.6V	*0.6V	*–191mV	*–143mV	40.6V	–40.9V	4.49V	*0V	*7.4V

Pin Name \ Ref. No.	Q803	Q804	Q809	Q810	Q813	Q814	Q815
B	*0.58V	*.058V	*15.3mV	*14.5mV	41.5V	–41.1V	*5.07V
C	*14.3V	*14.3V	*Pulse	*Pulse	58.2V	–58.2V	*14.08V
E	*0.6V	*0.6V	*–219V	–130mV	41.2V	–40.8V	*4.52V

● Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Volt Meter
3. Measuring Point Reference : Primary Ground (marked *)
   : Secondary Ground (others)
4. Measuring Condition : No Signal Input

NOTE:
All resistance values are in ohms. K= 1,000 M= 1,000,000
All capacitance values are in microfarads. P= 1/1,000,000



Pin No. \ Ref.No.	IC701	IC801
1	*0.58V	*0.59V
2	*0.58V	*0.59V
3	*5.02V	*3.87V
4	*1.78V	*1.78V
5	*14.2V	*14.2V
6	*14.2V	*14.2V
7	*13.79V	*13.79V
8	*174.8mV	*188.4mV
9	*5.05V	*5.05V
10	*5.02V	*5.07V
11	*13.66V	*14.09V
12	*0V	*0V
13	*65.4mV	65.4mV
14	*5.02V	*5.07V
15	*0.98V	*0.98V
16	1.42V	*1.38V
17	*11.3V	*11.3V
18	*10.68V	*10.69V
19	–21.25V	–21.03V
20	–22.4V	–22.25V

Pin Name \ Ref. No.	Q711	Q712	Q811	Q812	Q705 ~ 708	Q805 ~ 808
S	41.17V	–58.1V	41.66V	–58V	*0V	*0V
D	58.3V	–41.3V	58.2V	–41.1V	*Pulse	*Pulse
G	41V	–58.3V	41.5V	–58.2V	*0.61V	*0.62V

Pin Name \ Ref. No.	Q501	Q502	Q503	Q504	Q505	Q506	Q507	Q508	Q530	Q531	Q532
B	*65.2mV	*13.51V	*53mV	*0.71V	*4.12V	*0.26V	*53mV	*13.58V	*8.87V	*7.64V	*0.26V
C	*13.66V	*–0.66V	*0.91V	*173.8mV	*0.26V	*13.39V	*13.58V	*0.97V	*14.2V	*8.28V	*13.64V
E	*53mV	*13.52V	*0V	*0V	*0V	*13.64V	*0V	*13.64V	*8.31V	*8.31V	*0.6V

Pin Name \ Ref. No.	Q703	Q704	Q709	Q710	Q713	Q714	Q715	Q716	Q717
B	*0.58V	*0.58V	*12.7mV	*10.7mV	41V	–41.3V	*5.02V	*0.74V	*8.1V
C	*14.3V	*14.3V	*Pulse	*Pulse	58.3V	–53.3V	*13.64V	*49.7mV	*14.3V
E	*0.6V	*0.6V	*–191mV	*–143mV	40.6V	–40.9V	4.49V	*0V	*7.4V

Pin Name \ Ref. No.	Q803	Q804	Q809	Q810	Q813	Q814	Q815
B	*0.58V	*.058V	*15.3mV	*14.5mV	41.5V	–41.1V	*5.07V
C	*14.3V	*14.3V	*Pulse	*Pulse	58.2V	–58.2V	*14.08V
E	*0.6V	*0.6V	*–219V	–130mV	41.2V	–40.8V	*4.52V

● Voltage Measuring Condition

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Volt Meter
3. Measuring Point Reference : Primary Ground (marked *)
   : Secondary Ground (others)
4. Measuring Condition : No Signal Input

3558	3558

Q711	Q712	Q811	Q812	Q705 ~ 708	Q805 ~ 808
41.17V	–58.1V	41.66V	–58V	*0V	*0V
58.3V	–41.3V	58.2V	–41.1V	*Pulse	*Pulse
41V	–58.3V	41.5V	–58.2V	*0.61V	*0.62V

06	Q507	Q508	Q530	Q531	Q532
26V	*53mV	*13.58V	*8.87V	*7.64V	*0.26V
39V	*13.58V	*0.97V	*14.2V	*8.28V	*13.64V
64V	*0V	*13.64V	*8.31V	*8.31V	*0.6V

4	Q715	Q716	Q717
3V	*5.02V	*0.74V	*8.1V
3V	*13.64V	*49.7mV	*14.3V
9V	4.49V	*0V	*7.4V

4	Q815
.1V	*5.07V
.2V	*14.08V
.8V	*4.52V

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF = microfarads, pF = picofarads

Abbreviations

RES. =	Resistor	CAP. =	Capacitor
C.F. =	Carbon Film	ELY. =	Electrolytic
M.F. =	Metal Film	CER. =	Ceramic
M.O. =	Metal Oxide Film	MYL. =	Mylar
M.P. =	Metal Plate	TAN. =	Tantalum
TR. =	Transistor	POLY. =	Polystyrol
TRANS. =	Transformer	PP. =	Polypropylene
CP. =	Chip	PLT. =	Polyethylene
		PF. =	Polyester Film

Symbol No.	Part No.	Description
Main · Front P.C.Board		
IC		
IC701	51T25741W02	25741W02
Transistors		
Q111	48T69176F01	2SC3421
Q112	48T69177F01	2SA1358
Q211	48T69176F01	2SC3421
Q212	48T69177F01	2SA1358
Q501	48T82758F03	2SC4038
Q502	48T82762F02	DTA114EL
Q503	48T82763F24	DTD113EL
Q504	48T82758F05	2SC4038
Q505	48T82763F02	DTC114EL
Q506	48T82762F02	DTA114EL
Q507	48T82763F05	DTC143XL
Q508	48T82762F02	DTA114EL
Q511	48T82762F02	DTA114EL
Q512	48T82763F02	DTC114EL
Q513	48T82758F03	2SC4038
Q514	48T82757F01	2SA1561
Q515	48T82763F02	DTC114EL
Q516	48T60751F01	2SA1145
Q517	48T60752F01	2SC2705
Q518	48T60752F01	2SC2705
Q530	48T69176F01	2SC3421
Q531	48T84366F03	2SB1243
Q533	48T72415F05	DTC114TS
Q703	48T35056W01	2SC3693
Q704	48T35056W01	2SC3693
Q709	48T69176F01	2SC3421
Q710	48T69176F01	2SC3421
Q711	48T66948F03	FET, 2SK246
Q712	48T66948F03	FET, 2SK246
Q713	48T35056W01	2SC3693
Q714	48T35055W01	2SA1443
Q715	48T82758F03	2SC4038
Diodes		
D105	48T73079F02	1SS82
D106	48T73079F02	1SS82
D107	48T73079F02	1SS82
D205	48T73079F02	1SS82
D206	48T73079F02	1SS82
D207	48T73079F02	1SS82
D501	48T68828F01	1SS133
D502	48T68828F01	1SS133
D503	48T68828F01	1SS133
D504	48T68828F01	1SS133
D505	48T68828F01	1SS133
D507	48T68828F01	1SS133
D508	48T68828F01	1SS133
D509	48T73079F02	1SS82
D510	48T73079F02	1SS82
D703	48T70933F01	1SS136
D704	48T70933F01	1SS136
D705	48T70933F01	1SS136
D706	48T70933F01	1SS136
D707	48T80987F01	FMG22S
D712	48T80987F02	FMG22R
ZD501	48T90517F21	Zener, HZS4.7NB2
ZD530	48T90517F41	Zener, HZS9.1NB1
ZD701	48T90517F65	Zener, HZS20NB1
ZD702	48T90517F65	Zener, HZS20NB1
ZD703	48T90517F65	Zener, HZS20NB1
ZD704	48T90517F65	Zener, HZS20NB1
ZD705	48T83128F56	Zener, HZS202L
ZD706	48T83128F56	Zener, HZS202L
ZD707	48T83128F56	Zener, HZS202L
ZD708	48T83128F56	Zener, HZS202L
ZD709	48T83128F50	Zener, HZS162L
ZD710	48T83128F50	Zener, HZS162L
ZD716	48T90517F65	Zener, HZS20NB1

Symbol No.	Part No.	Description
Coils		
L101	24T74372F01	1.1μH
L201	24T74372F01	1.1μH
L703	25T45072W01	Choke
L704	25T45072W01	Choke
Thermistors		
TH101	48T57369F21	100K ohm
TH201	48T57369F21	100K ohm
TH701	48T60670F01	20K ohm
TH702	48S42931U33	5K ohm
Relay / Transformer		
RL101	80T95141F08	DE2T
T701	25T35582W01	Transformer, DC-DC
Capacitors		
E102	23T00180L25	ELY., 10μF / 50V
C108	08T90316F25	TF, 0.047μF
E202	23T00180L25	ELY., 10μF / 50V
C208	08T90316F25	TF, 0.047μF
C501	08S65480F45	CER., 470pF
E501	23T35463W24	ELY., 100μF / 16V
C502	08S65480F37	CER., 100pF
E502	23T16360W22	ELY., 470μF / 10V
C504	23T16387W17	ELY., (B.P) 470μF / 10V
E530	23T15412W13	ELY., 10μF / 16V
C701	08T50579F25	TF, 1μF
E701	23T95135F76	ELY., 2700μF / 16V
C702	08T90316F29	TF, 0.1μF
E702	23T95135F76	ELY., 2700μF / 16V
E703	23Q32161W01	ELY., 220μF / 80V
E704	23Q32161W01	ELY., 220μF / 80V
C705	08T90316F21	TF, 0.022μF
E705	23T35639W02	ELY., 8200μF / 30V
C706	08T90316F21	TF, 0.022μF
E706	23T35639W02	ELY., 8200μF / 30V

Symbol No.	Part No.	Description
C707	08T52714F01	CER., 1000pF
E707	23T00207L01	ELY., 100μF / 50V
C708	08T52714F01	CER., 1000pF
E708	23T00207L01	ELY., 100μF / 50V
C709	08T90316F37	TF, 0.47μF
E709	23T00181L48	ELY., 100μF / 50V
C710	08T50579F21	TF, 0.47μF
E710	23T00181L48	ELY., 100μF / 50V
E711	23T35463W37	ELY., 470μF / 25V
E712	23T35463W37	ELY., 470μF / 25V
C715	08T90316F37	TF, 0.47μF
C716	08T90316F37	TF, 0.47μF
E716	23T15412W13	ELY., 10μF / 16V
E717	23T35463W15	ELY., 220μF / 10V
E718	23T15412W13	ELY., 10μF / 16V
E719	23T16360W34	ELY., 47μF / 16V
C720	08T50579F26	TF, 1000pF
E720	23T35462W18	ELY., 47μF / 16V
Resistors		
R125	06S81094F59	M.F., 560 ohm 1/2W
R128	06S81094F09	M.F., 4.7 ohm 1/2W
R129	06S81094F09	M.F., 4.7 ohm 1/2W
R130	06T67397F02	Cement, 0.1ohm 5W×2
R132	06T92263F01	M.F., 10 ohm 1W
R133	06T92263F01	M.F., 10 ohm 1W
R225	06S81094F59	M.F., 560 ohm 1/2W
R228	06S81094F09	M.F., 4.7 ohm 1/2W
R229	06S81094F09	M.F., 4.7 ohm 1/2W
R230	06T67397F02	Cement, 0.1ohm 5W×2
R232	06T92263F01	M.F., 10 ohm 1W
R233	06T92263F01	M.F., 10 ohm 1W
R504	06S81094F59	M.F., 560 ohm 1/2W
R505	06S81094F59	M.F., 560 ohm 1/2W
R506	06S81094F59	M.F., 560 ohm 1/2W
R507	06S81094F59	M.F., 560 ohm 1/2W
R509	06S81094F59	M.F., 560 ohm 1/2W
R510	06S81094F59	M.F., 560 ohm 1/2W
R511	06S81094F59	M.F., 560 ohm 1/2W
R512	06S81094F59	M.F., 560 ohm 1/2W
R522	06S81094F76	M.F., 3K ohm 1/2W
R707	06T93535F49	M.F., 220 ohm 1/2W
R708	06T93535F49	M.F., 220 ohm 1/2W
R711	06T92264F23	M.F., 82 ohm 2W
R712	06T92264F23	M.F., 82 ohm 2W

Symbol No.	Part No.	Description
R713	06S81095F08	M.F., 1 ohm 1/2W
R714	06S81095F08	M.F., 1 ohm 1/2W
R715	06S81095F08	M.F., 1 ohm 1/2W
R716	06S81095F08	M.F., 1 ohm 1/2W
R725	06C44652G26	M.F., 10 ohm 1W
R726	06C44652G26	M.F., 10 ohm 1W
R727	06S81094F55	M.F., 390 ohm 1/2W
R728	06S81094F55	M.F., 390 ohm 1/2W
VR102	18T45040F05	Variable, 470 ohm
VR202	18T45040F05	Variable, 470 ohm
VR701	18T45040F11	Variable, 4.7K ohm

Main · Rear P.C.Board

IC's

IC501	51T35529W01	PS2501-1
IC502	51T35529W01	PS2501-1
IC801	51T25741W02	25741W02

Transistors

Q311	48T69176F01	2SC3421
Q312	48T69177F01	2SA1358
Q411	48T69176F01	2SC3421
Q412	48T69177F01	2SA1358
Q509	48T82758F03	2SC4038
Q611	48T82762F02	DTA114EL
Q612	48T82763F02	DTC114EL
Q613	48T82758F03	2SC4038
Q614	48T82757F01	2SA1561
Q615	48T82763F02	DTC114EL
Q616	48T60751F01	2SA1145
Q617	48T60752F01	2SC2705
Q618	48T60752F01	2SC2705
Q803	48T35056W01	2SC3693
Q804	48T35056W01	2SC3693
Q809	48T69176F01	2SC3421
Q810	48T69176F01	2SC3421
Q811	48T66948F03	FET, 2SK246
Q812	48T66948F03	FET, 2SK246
Q813	48T35056W01	2SC3693
Q814	48T35055W01	2SA1443
Q815	48T82758F03	2SC4038

Symbol No.	Part No.	Description

Diodes

D305	48T73079F02	1SS82
D306	48T73079F02	1SS82
D307	48T73079F02	1SS82
D405	48T73079F02	1SS82
D406	48T73079F02	1SS82
D407	48T73079F02	1SS82
D603	48T68828F01	1SS133
D609	48T73079F02	1SS82
D610	48T73079F02	1SS82
D803	48T70933F01	1SS136
D804	48T70933F01	1SS136
D805	48T70933F01	1SS136
D806	48T70933F01	1SS136
D807	48T80987F01	FMG22S
D812	48T80987F02	FMG22R
ZD801	48T90517F65	Zener, HZS20NB1
ZD802	48T90517F65	Zener, HZS20NB1
ZD803	48T90517F65	Zener, HZS20NB1
ZD804	48T90517F65	Zener, HZS20NB1
ZD805	48T83128F56	Zener, HZS202L
ZD806	48T83128F56	Zener, HZS202L
ZD807	48T83128F56	Zener, HZS202L
ZD808	48T83128F56	Zener, HZS202L
ZD809	48T83128F50	Zener, HZS162L
ZD810	48T83128F50	Zener, HZS162L
ZD816	48T90517F65	Zener, HZS20NB1

Coils

L301	24T74372F01	1.1μH
L401	24T74372F01	1.1μH
L803	25T45072W01	Choke
L804	25T45072W01	Choke
L805	24T93437F15	Inductor, 150μH

Relay / Transformer

RL301	80T95141F08	DE2T
T801	25T35582W02	Transformer, DC-DC

Symbol No.	Part No.	Description
Switches		
S102	40T25473W02	Slide, SSSF12 (INPUT SENSITIVITY · 1 / 2CH)
S302	40T25473W02	Slide, SSSF12 (INPUT SENSITIVITY · 3 / 4CH)
Thermistors		
TH301	48T57369F21	100K ohm
TH401	48T57369F21	100K ohm
TH801	48T60670F01	20K ohm
TH802	48S42931U33	5K ohm
Capacitors		
E302	23T00180L25	ELY., 10μF / 50V
C308	08T90316F25	TF, 0.047μF
E402	23T00180L25	ELY., 10μF / 50V
C408	08T90316F25	TF, 0.047μF
E503	23T15412W13	ELY., 10μF / 16V
C602	08S65480F37	CER., 100pF
C604	23T16387W17	ELY., (B.P) 470μF / 10V
C801	08T50579F25	TF, 1μF
E801	23T95135F76	ELY., 2700μF / 16V
C802	08T90316F29	TF, 0.1μF
E802	23T95135F76	ELY., 2700μF / 16V
E803	23Q32161W01	ELY., 220μF / 80V
E804	23Q32161W01	ELY., 220μF / 80V
C805	08T90316F21	TF, 0.022μF
E805	23T35639W02	ELY., 8200μF / 30V
C806	08T90316F21	TF, 0.022μF
E806	23T35639W02	ELY., 8200μF / 30V
C807	08T52714F01	CER., 1000pF
E807	23T00207L01	ELY., 100μF / 50V
C808	08T52714F01	CER., 1000pF
E808	23T00207L01	ELY., 100μF / 50V
C809	08T90316F37	TF, 0.47μF
E809	23T00181L48	ELY., 100μF / 50V
C810	08T90316F37	TF, 0.47μF
E810	23T00181L48	ELY., 100μF / 50V

Symbol No.	Part No.	Description
E811	23T35463W37	ELY., 470μF / 25V
C812	08T90316F05	TF, 1000pF
E812	23T35463W37	ELY., 470μF / 25V
C815	08T90316F37	TF, 0.47μF
C816	08T90316F37	TF, 0.47μF
E816	23T15412W13	ELY., 10μF / 16V
E817	23T35463W15	ELY., 220μF / 10V
E818	23T15412W13	ELY., 10μF / 16V
E819	23T35462W18	ELY., 47μF / 16V
C820	08T50579F26	TF, 1000pF
E820	23T16360W34	ELY., 47μF / 16V
Resistors		
R325	06S81094F59	M.F., 560 ohm 1/2W
R328	06S81094F09	M.F., 4.7 ohm 1/2W
R329	06S81094F09	M.F., 4.7 ohm 1/2W
R330	06T67397F02	Cement, 0.1ohm 5W×2
R332	06T92263F01	M.F., 10 ohm 1W
R333	06T92263F01	M.F., 10 ohm 1W
R425	06S81094F59	M.F., 560 ohm 1/2W
R428	06S81094F09	M.F., 4.7 ohm 1/2W
R429	06S81094F09	M.F., 4.7 ohm 1/2W
R430	06T67397F02	Cement, 0.1ohm 5W×2
R432	06T92263F01	M.F., 10 ohm 1W
R433	06T92263F01	M.F., 10 ohm 1W
R622	06S81094F76	M.F., 3K ohm 1/2W
R807	06T93535F49	M.F., 220 ohm 1/2W
R808	06T93535F49	M.F., 220 ohm 1/2W
R811	06T92264F23	M.F., 82 ohm 2W
R812	06T92264F23	M.F., 82 ohm 2W
R813	06S81095F08	M.F., 1 ohm 1/2W
R814	06S81095F08	M.F., 1 ohm 1/2W
R815	06S81095F08	M.F., 1 ohm 1/2W
R816	06S81095F08	M.F., 1 ohm 1/2W
R825	06C44652G26	M.F., 10 ohm 1W
R826	06C44652G26	M.F., 10 ohm 1W
R827	06S81094F55	M.F., 390 ohm 1/2W
R828	06S81094F55	M.F., 390 ohm 1/2W
VR101	18T16289W02	Rotary, Volume 5K ohm
VR301	18T16289W02	Rotary, Volume 5K ohm

Symbol No.	Part No.	Description
VR302	18T45040F05	Variable, 470 ohm
VR402	18T45040F05	Variable, 470 ohm
VR801	18T45040F11	Variable, 4.7K ohm

Audio P.C.Board

IC's

IC101	51T80136F02	M5238L
IC201	51T80136F02	M5238L
IC301	51T80136F02	M5238L
IC401	51T80136F02	M5238L

Capacitors

C101	08S53332F27	CP.,	220pF
E101	23T25149W06	ELY.,	2.2μF/50V
C102	08S53332F15	CP.,	22pF
C201	08S53332F27	CP.,	220pF
E201	23T25149W06	ELY.,	2.2μF/50V
C202	08S53332F15	CP.,	22pF
C301	08S53332F27	CP.,	220pF
E301	23T25149W06	ELY.,	2.2μF/50V
C302	08S53332F15	CP.,	22pF
C401	08S53332F27	CP.,	220pF
E401	23T25149W06	ELY.,	2.2μF/50V
C402	08S53332F15	CP.,	22pF

Resistors (All resistors are chip 1/8W ± 5% unless otherwise noted.)

R101	06S53330F93	47K ohm
R102	06S53330F53	1K ohm
R103	06S53330F67	3.9K ohm
R104	06S53330F77	10K ohm
R105	06S53330F77	10K ohm
R201	06S53330F93	47K ohm
R202	06S53330F53	1K ohm
R203	06S53330F67	3.9K ohm
R204	06S53330F77	10K ohm
R205	06S53330F77	10K ohm
R301	06S53330F93	47K ohm
R302	06S53330F53	1K ohm
R303	06S53330F67	3.9K ohm
R304	06S53330F77	10K ohm
R305	06S53330F77	10K ohm
R401	06S53330F93	47K ohm
R402	06S53330F53	1K ohm
R403	06S53330F67	3.9K ohm
R404	06S53330F77	10K ohm
R405	06S53330F77	10K ohm

Pre (1) P.C.Board

Transistors

Q101	48T64376F01	2SC3423
Q102	48T64376F01	2SC3423
Q103	48T52146F03	FET, 2SK146
Q104	48T64376F01	2SC3423
Q105	48T64375F01	2SA1360
Q106	48T64375F01	2SA1360
Q107	48T64375F01	2SA1360
Q108	48T64376F01	2SC3423
Q109	48T64376F01	2SC3423

Diodes

D101	48T73079F02	1SS82
D102	48T73079F02	1SS82
D103	48T73079F02	1SS82
D104	48T73079F02	1SS82
ZD101	48T52741F14	Zener, HZ7B2L

Symbol No.	Part No.	Description
Capacitors		
C103	08T90316F01	TF, 470pF
C104	08T81196F19	Mica, 33pF
C105	08T81196F25	Mica, 47pF
C106	08T81196F25	Mica, 47pF
C107	08T00151L13	PP., 1000pF
C114	23T61177F06	ELY., (B.P) 4.7μF/100V
Resistors		
R106	06T00147L65	C.F., 1K ohm 1/2W
R107	06T00148L38	C.F., 1M ohm 1/2W
R108	06T00147L41	C.F., 100 ohm 1/2W
R109	06T00147L39	C.F., 82 ohm 1/2W
R110	06T00147L72	C.F., 2K ohm 1/2W
R117	06S81094F33	M.F., 47 ohm 1/2W
R118	06T00148L38	C.F., 1M ohm 1/2W
R121	06S81094F33	M.F., 47 ohm 1/2W
R122	06S81094F91	M.F., 12K ohm 1/2W
R123	06S81094F41	M.F., 100 ohm 1/2W
R124	06S81094F41	M.F., 100 ohm 1/2W
Pre (2) P.C.Board		
Transistors		
Q201	48T64376F01	2SC3423
Q202	48T64376F01	2SC3423
Q203	48T52146F03	FET, 2SK146
Q204	48T64376F01	2SC3423
Q205	48T64375F01	2SA1360
Q206	48T64375F01	2SA1360
Q207	48T64375F01	2SA1360
Q208	48T64376F01	2SC3423
Q209	48T64376F01	2SC3423

Symbol No.	Part No.	Description
Diodes		
D201	48T73079F02	1SS82
D202	48T73079F02	1SS82
D203	48T73079F02	1SS82
D204	48T73079F02	1SS82
ZD201	48T52741F14	Zener, HZ7B2L
Capacitors		
C203	08T90316F01	TF, 470pF
C204	08T81196F19	Mica, 33pF
C205	08T81196F25	Mica, 47pF
C206	08T81196F25	Mica, 47pF
C207	08T00151L13	PP., 1000pF
C213	23T61177F06	ELY., (B.P) 4.7μF/100V
Resistors		
R206	06T00147L65	C.F., 1K ohm 1/2W
R207	06T00148L38	C.F., 1M ohm 1/2W
R208	06T00147L41	C.F., 100 ohm 1/2W
R209	06T00147L39	C.F., 82 ohm 1/2W
R210	06T00147L72	C.F., 2K ohm 1/2W
R217	06S81094F33	M.F., 47 ohm 1/2W
R218	06T00148L38	C.F., 1M ohm 1/2W
R221	06S81094F33	M.F., 47 ohm 1/2W
R222	06S81094F91	M.F., 12K ohm 1/2W
R223	06S81094F41	M.F., 100 ohm 1/2W
R224	06S81094F41	M.F., 100 ohm 1/2W
Pre (3) P.C.Board		
Transistors		
Q301	48T64376F01	2SC3423
Q302	48T64376F01	2SC3423
Q303	48T52146F03	FET, 2SK146
Q304	48T64376F01	2SC3423

Symbol No.	Part No.	Description
Q305	48T64375F01	2SA1360
Q306	48T64375F01	2SA1360
Q307	48T64375F01	2SA1360
Q308	48T64376F01	2SC3423
Q309	48T64376F01	2SC3423
Diodes		
D301	48T73079F02	1SS82
D302	48T73079F02	1SS82
D303	48T73079F02	1SS82
D304	48T73079F02	1SS82
ZD301	48T52741F14	Zener, HZ7B2L
Capacitors		
C303	08T90316F01	TF, 470pF
C304	08T81196F19	Mica, 33pF
C305	08T81196F25	Mica, 47pF
C306	08T81196F25	Mica, 47pF
C307	08T00151L13	PP., 1000pF
C313	23T61177F06	ELY., (B.P) 4.7μF / 100V
Resistors		
R306	06T00147L65	C.F., 1K ohm 1/2W
R307	06T00148L38	C.F., 1M ohm 1/2W
R308	06T00147L41	C.F., 100 ohm 1/2W
R309	06T00147L39	C.F., 82 ohm 1/2W
R310	06T00147L72	C.F., 2K ohm 1/2W
R317	06S81094F33	M.F., 47 ohm 1/2W
R318	06T00148L38	C.F., 1M ohm 1/2W
R321	06S81094F33	M.F., 47 ohm 1/2W
R322	06S81094F91	M.F., 12K ohm 1/2W
R323	06S81094F41	M.F., 100 ohm 1/2W
R324	06S81094F41	M.F., 100 ohm 1/2W

Symbol No.	Part No.	Description
Pre (4) P.C.Board		
Transistors		
Q401	48T64376F01	2SC3423
Q402	48T64376F01	2SC3423
Q403	48T52146F03	FET, 2SK146
Q404	48T64376F01	2SC3423
Q405	48T64375F01	2SA1360
Q406	48T64375F01	2SA1360
Q407	48T64375F01	2SA1360
Q408	48T64376F01	2SC3423
Q409	48T64376F01	2SC3423
Diodes		
D401	48T73079F02	1SS82
D402	48T73079F02	1SS82
D403	48T73079F02	1SS82
D404	48T73079F02	1SS82
ZD401	48T52741F14	Zener, HZ7B2L
Capacitors		
C403	08T90316F01	TF, 470pF
C404	08T81196F19	Mica, 33pF
C405	08T81196F25	Mica, 47pF
C406	08T81196F25	Mica, 47pF
C407	08T00151L13	PP., 1000pF
C413	23T61177F06	ELY., (B.P) 4.7μF / 100V
Resistors		
R406	06T00147L65	C.F., 1K ohm 1/2W
R407	06T00148L38	C.F., 1M ohm 1/2W
R408	06T00147L41	C.F., 100 ohm 1/2W
R409	06T00147L39	C.F., 82 ohm 1/2W
R410	06T00147L72	C.F., 2K ohm 1/2W

Symbol No.	Part No.	Description
R417	06S81094F33	M.F., 47 ohm 1/2W
R418	06T00148L38	C.F., 1M ohm 1/2W
R421	06S81094F33	M.F., 47 ohm 1/2W
R422	06S81094F91	M.F., 12K ohm 1/2W
R423	06S81094F41	M.F., 100 ohm 1/2W
R424	06S81094F41	M.F., 100 ohm 1/2W

Common P.C.Board

Transistors

Q716	48T82758F02	2SC4038
Q717	48T69176F01	2SC3421

Diodes

D701	48T68079F03	30D4
ZD713	48T90517F39	Zener, HZS8.2NB2
ZD714	48T90517F18	Zener, HZS4.3NB2

Coil

L701	25T35113W01	Choke

Capacitors

E721	23T35463W27	ELY., 470μF / 16V
E722	23T15412W13	ELY., 10μF / 16V
E723	23T35463W27	ELY., 470μF / 16V

Resistor

R701	06T71921F03	Cement, 0.1ohm 5W

Symbol No.	Part No.	Description

Speaker P.C.Board

Capacitors

C109	08T90316F21	TF, 0.022μF
C209	08T90316F21	TF, 0.022μF
C309	08T90316F21	TF, 0.022μF
C409	08T90316F21	TF, 0.022μF

LED P.C.Board

LED's

LD501	48T72180F01	AABG4307 (ORG / GRN)
LD502	48T72180F01	AABG4307 (ORG / GRN)
LD503	48T72180F01	AABG4307 (ORG / GRN)
LD504	48T72180F01	AABG4307 (ORG / GRN)

Fuse P.C.Board

Diodes

D506	48T70933F01	1SS136
D702	48S40477U01	1N4003

Miscellaneous

D709	48T80987F01	Diode, FMG22S
D710	48T80987F02	Diode, FMG22R
D809	48T80987F01	Diode, FMG22S
D810	48T80987F02	Diode, FMG22R
ET101	29T35595W08	Speaker Output Terminal (8P)
ET701	29T73269F02	Power Supply Terminal (4P)
ET702	01T74571F01	Assy., Coupler (2P)
F701	65S58596F06	Fuse, Auto 20A (For BATT Line)
F702	65S58596F06	Fuse, Auto 20A (For BATT Line)
JK101	09T81475F04	Jack, RCA Input (4P)

Symbol No.	Part No.	Description
L702	25T25761W01	Choke, Coil
M701	59T25036W02	Motor, Fan (12V-90mA)
Q110	48T64376F01	Transistor, 2SC3423
Q113	48T95042F01	Transistor, 2SC4388
Q114	48T95041F01	Transistor, 2SA1673
Q210	48T64376F01	Transistor, 2SC3423
Q213	48T95042F01	Transistor, 2SC4388
Q214	48T95041F01	Transistor, 2SA1673
Q310	48T64376F01	Transistor, 2SC3423
Q313	48T95042F01	Transistor, 2SC4388
Q314	48T95041F01	Transistor, 2SA1673
Q410	48T64376F01	Transistor, 2SC3423
Q413	48T95042F01	Transistor, 2SC4388
Q414	48T95041F01	Transistor, 2SA1673
Q705	48T25760W01	FET, IRFZ42
Q706	48T25760W01	FET, IRFZ42
Q707	48T25760W01	FET, IRFZ42
Q708	48T25760W01	FET, IRFZ42
Q805	48T25760W01	FET, IRFZ42
Q806	48T25760W01	FET, IRFZ42
Q807	48T25760W01	FET, IRFZ42
Q808	48T25760W01	FET, IRFZ42
S101	40T35512W03	Switch, Slide SSSF02 (INPUT MODE · 1/2CH)
S301	40T35512W03	Switch, Slide SSSF02 (INPUT MODE · 3/4CH)

Symbol No.	Part No.	Description

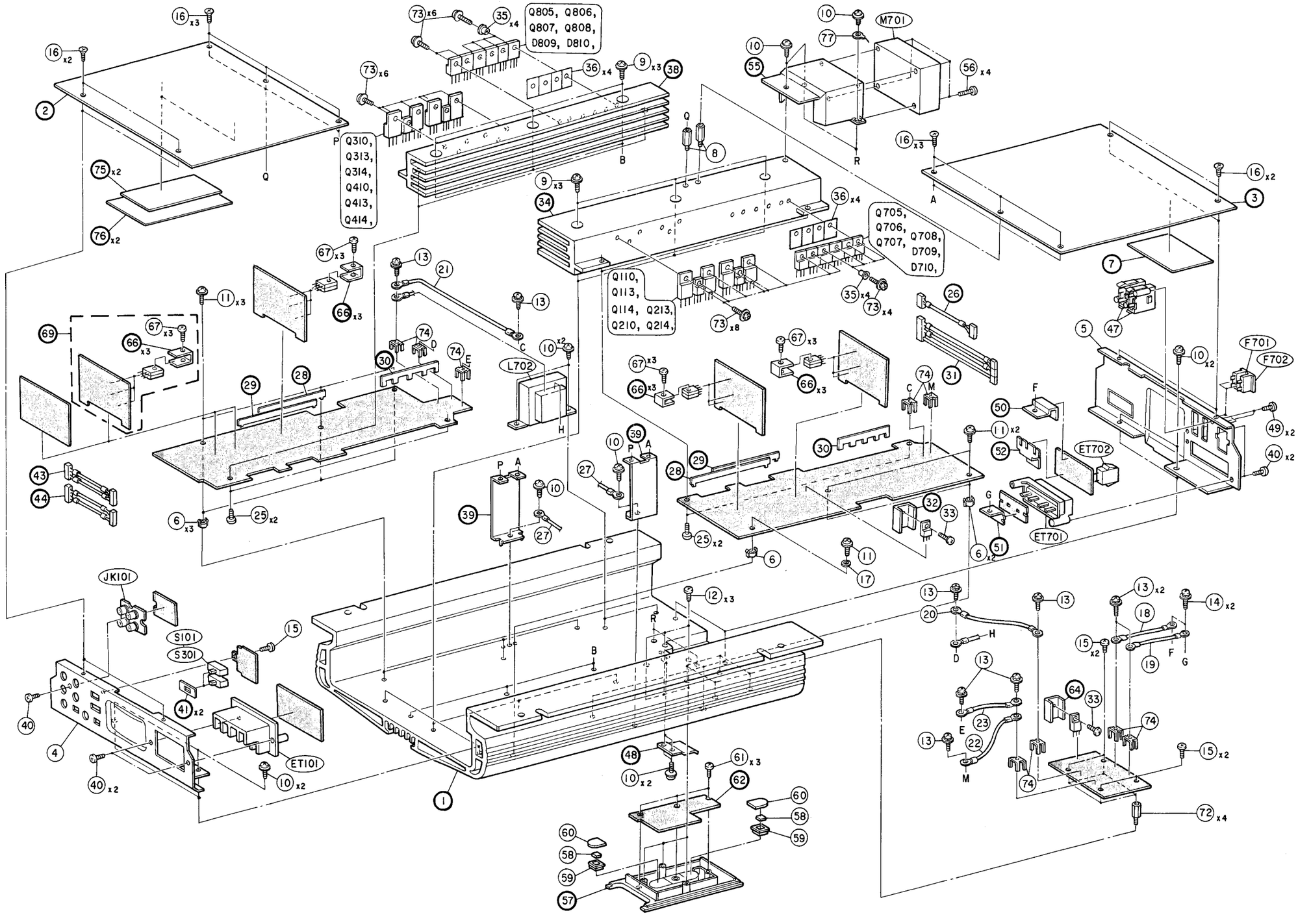
Cabinet Assembly Parts List

Note : The parts without parts list are not supplied.

Symbol No.	Index	Part No.	Description
4	5-A	27B31270W01	Assy., Chassis Side (L)
5	3-G	27B31267W01	Assy., Chassis Side (R)
6		07T35398W01	Support, P.C.Board
8	2-E	46A31467W02	Stad, Screw
9		03S71677F07	Screw, Flange (M2.6×8)
10		03S71677F06	Screw, Flange (M2.6×6)
11		03S71677F45	Screw, Flange (M2.6×12)
12	4-E	03S68555F16	Screw, Pan (M2.6×8)
13		03D40121T32	Screw, W/Double Washer (M3×6)
14	4-G	03D40121T33	Screw, W/Double Washer (M4×10)
15		03S44205G05	Screw, Pan (M3×5)
16		03S44205G53	Screw, Countersink (M2.6×5)
17	4-E	04S40075G13	Washer, Polyslider (M3.1)
18	4-G	01T15215W64	Assy., Connector (1P)
19	4-G	01T15215W65	Assy., Connector (1P)
20	4-F	01T15215W66	Assy., Connector (1P)
21	2-C	01T15215W67	Assy., Connector (1P)
22	4-F	01T15215W68	Assy., Connector (1P)
23	4-F	01T15215W69	Assy., Connector (1P)
25		03S71031F03	Screw, Bind (M3×6)
27		01T15031W02	Assy., Chassis Wire GND
33		03D40014G49	Screw, W/Washer (M3×8)
35		43T15941W01	Bushing
36		43T94356F01	Spacer
40		03S40012G41	Screw, Tapping (M3×8)
47	3-G	09T70751F01	Holder, Auto Fuse (1P)
49	3-H	03S68555F02	Screw, Pan (M2×5.5)
56	1-F	03S44205G71	Screw, Bind (M3×30)
58	5-D	36A13427W01	Lens, Base
59	5-D	36A13426W01	Lens, LED
60	2-D	15A13539W01	Lens, Guide
61	5-E	03S68555F09	Screw, Pan (M2×6)
67		03S72235F36	Screw, Bind (M3×10)
72	5-G	46A31467W01	Stad, Screw
73		03D40121T49	Bolt, Hex. W/Double Washer (M3×10)
74		29T94619F01	Terminal
77	1-E	01T15031W03	Assy., Chassis Wire GND

Symbol No.	Index	Part No.	Description

Exploded View (Cabinet)

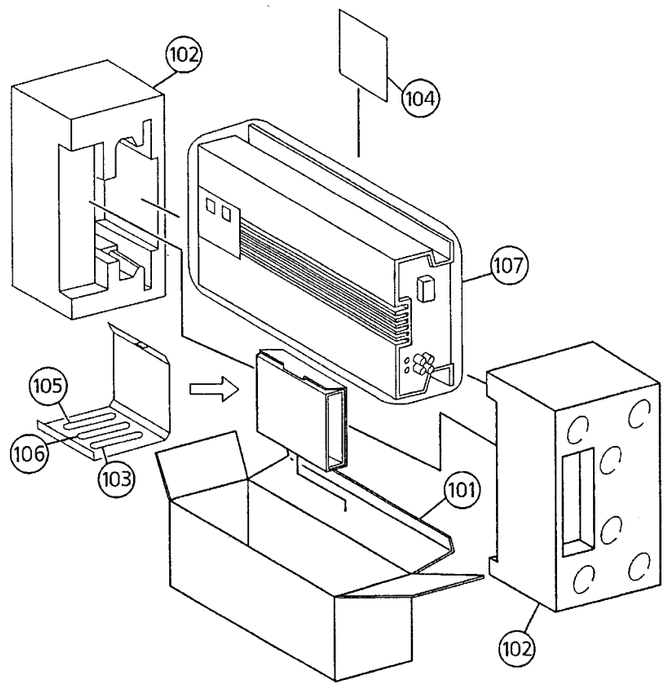


Packing Assembly Parts List

Symbol No.	Part No.	Description
○ 101	56S30003W81	Carton, Packing (Individual)
● 101	56S30003W81	Carton, Packing (Individual)
△ 101	56S30003W82	Carton, Packing (Individual)
102	56D31470W01	Tray, Packing
103	01V33400W27	Assy., Kit (Installation)
△ 103-1	03S40018G07	Screw, Tapping (M4×14)
△ 103-2	15A81064F01	Housing, Rubber
△ 103-3	15T35397W01	Housing, Rubber
△ 103-4	65S58596F06	Fuse, Auto 20A (For BATT Line)
○ 104	68P32052W59	Owner's Manual
△ 104	68P32052W60	Owner's Manual
● 104-1	68P32052W59	Owner's Manual
● 104-2	68P32052W65	Owner's Manual
105	01T73276F03	Assy., Kit Wire
106	01T95123F01	Assy., Kit Wire (2P)
107	56B72811F09	Sack, Polyethylene

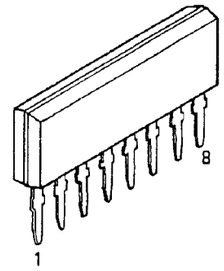
Note : ○: For North American Model Only,
△: For General Foreign Model Only,
● : For Canadian Model Only,
Others : Common.

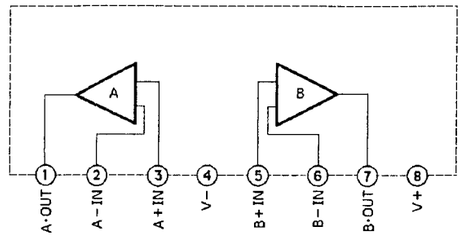
Packing Method View



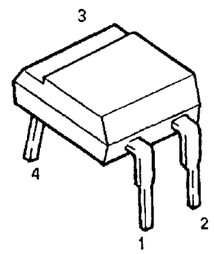
Semi - Conductor Lead Identifications

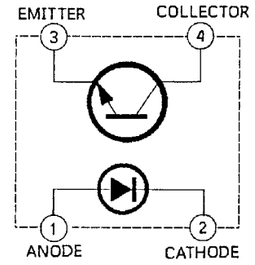
M5238L : IC101, 201, 301, 401



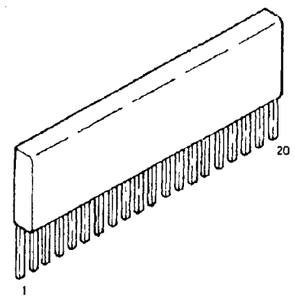


PS2501 - 1 : IC501, 502





25741W02 : IC701, 801



PIN NO.	CORD ADDRESS	I/O
1	PULSE 1	O
2	PULSE 2	O
3	RT	O
4	CT	O
5	V_{CC} 1	–
6	V_{CC} 1	–
7	REMOTE	I
8	OVER TEMP	I
9	SP PROTECT	O
10	1mV INPUT	I
11	V_{CC} 2	–
12	GND	–
13	DEAD TIME	O
14	1mV INPUT	I
15	V CONT	I
16	TH	O
17	CAP 2	O
18	CAP 1	O
19	+ V_{CC}	–
20	– V_{CC}	–